



# ARASF

## Atmospheric Research Airborne Support Facility

Flight Data Catalogue

### Flight

# A571

18 August 1997

## TACIA





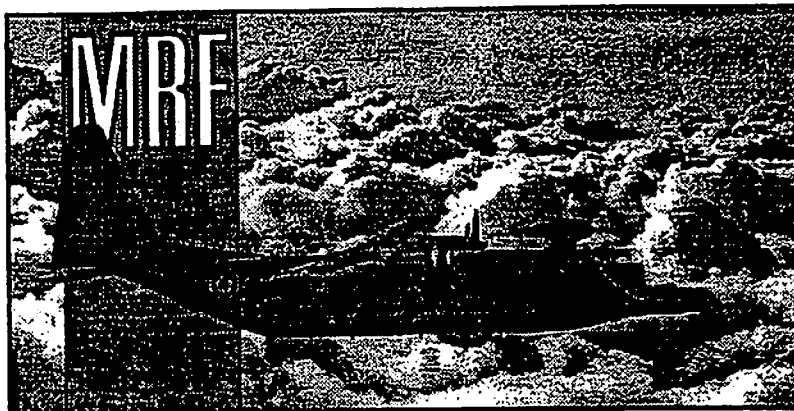
# FLIGHT FOLDER

Flight No. A571

DATE: 18/8/97

Take off:

Landing:



Aircraft Scientist : A KATE

Flight Leader : I. PURE

Others 2D : M. PICKERING

OZIR : K. DUNN

ECCL : T. KIM

LOTUS : B. GIDDINGS

NOXY : S. BAGGITT

PERORIDE : B. BARRY

FORMALDEHYDE : G. WILLS

CO : S. SCHWITZEN

PERCA : T. GILSON

Captain : M. PURE

Co-pilot : C. O'BRIEN

Navigator : T. SIMPSON

Engineer : M. LENNARDS

Loadmaster : K. CROSS

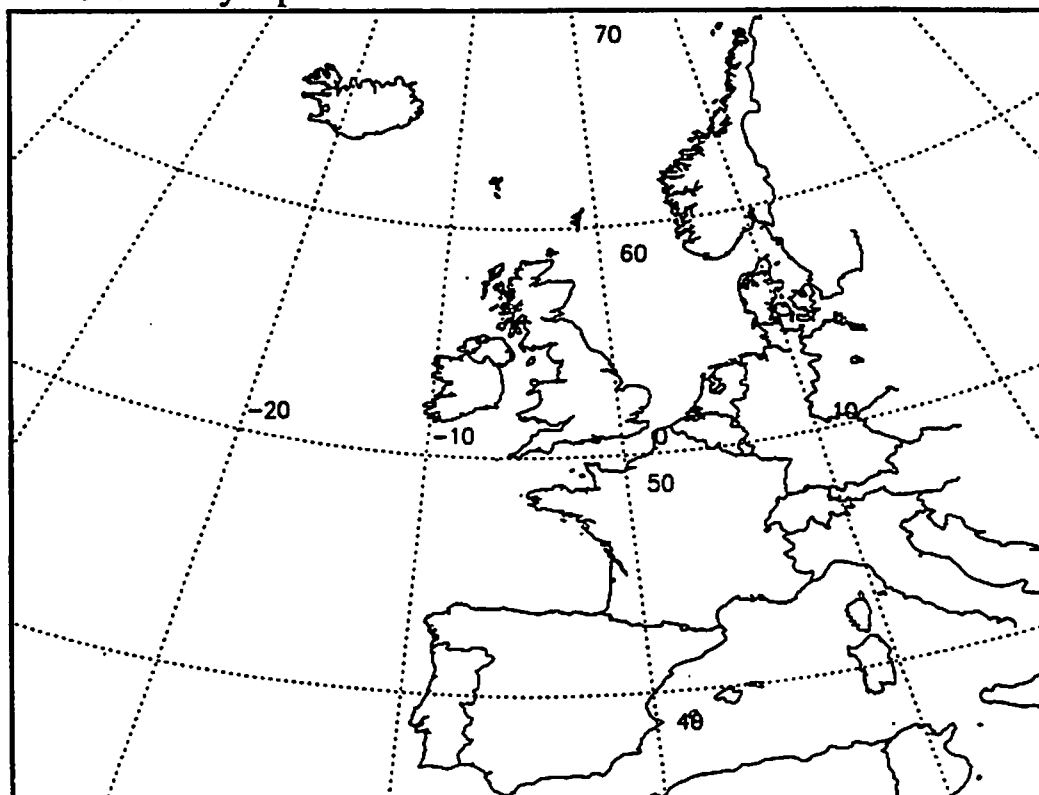
## MISSION SCIENTISTS

+ SPLG : DEITER KLEY  
PAUL MONKS  
CLAIRE REEVES

Trials Instructions MRF1 PACIA :

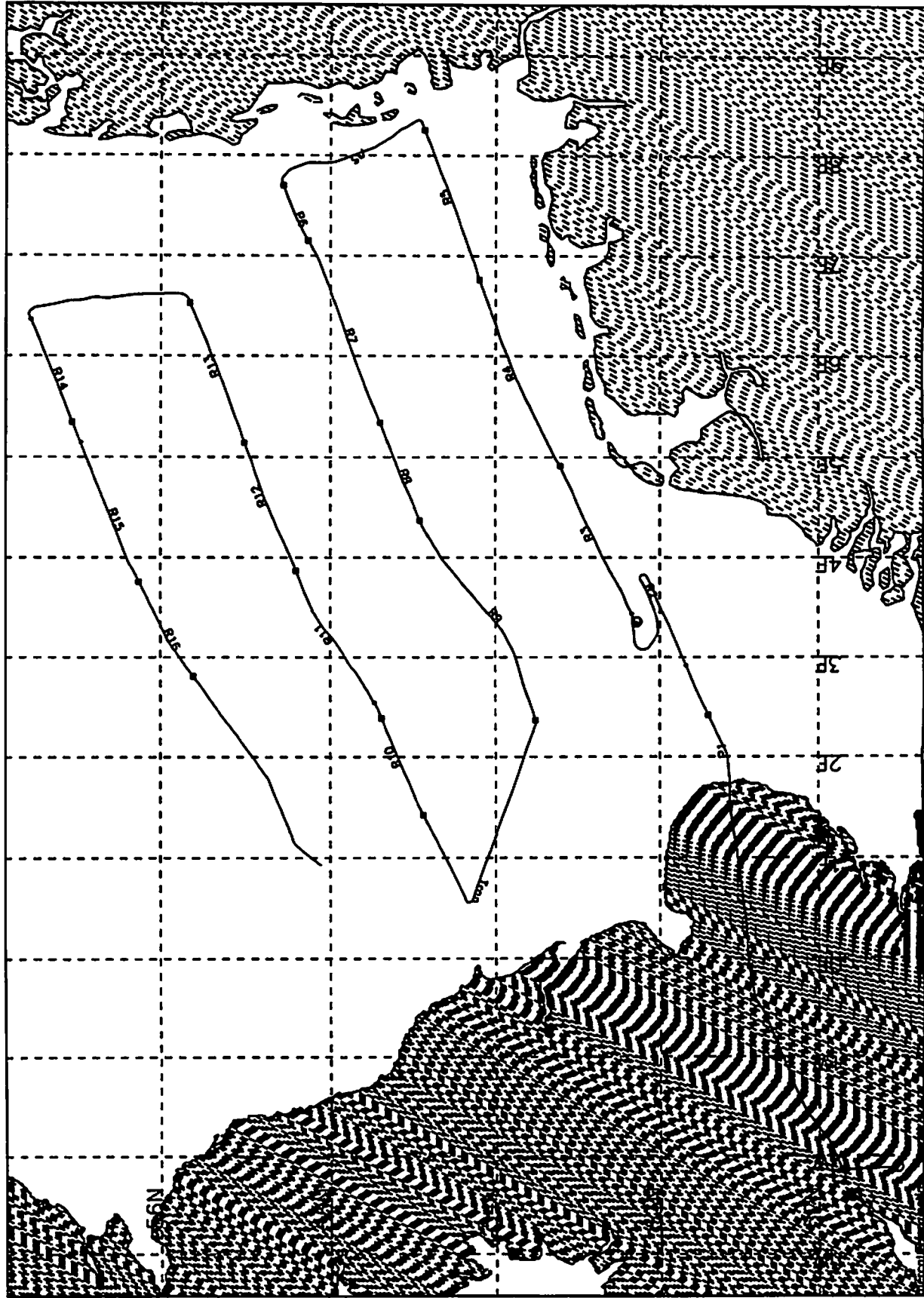
Operating area : NORTH SEA

## General synoptic situation



TIME :

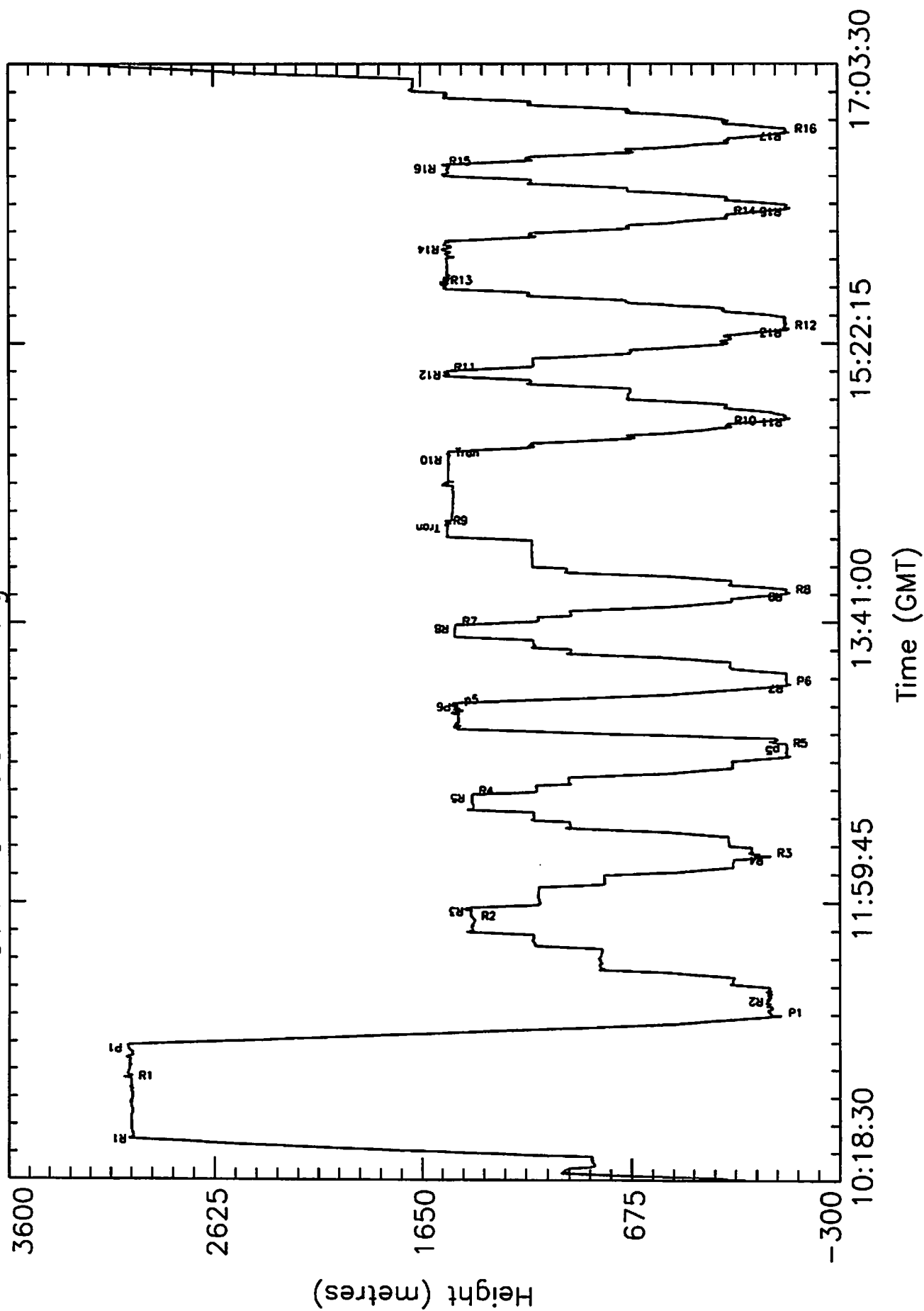
A571 18-AUG-97 10:18:30-17:03:30GMT



INS TRACK - run



# A571 18-AUG-97 Height time series



A571, 18th August, 1997  
TACIA  
Southern North Sea

Start time	End time	Event	Height (s)	Hdg	Comments
101810					Take off RAF Lyneham
103441	105500	R1	FL100	070°	
110801	111859	P1	FL100 250'	090°	
112540	112920	R2.1	350'	070°	
112920	114914	P2	400' 5000'	070°	Runs 2.2-2.4 within P2
113024	113252	R2.2	1000'	070°	
113534	113737	R2.3	3000'	065°	
114413	114814	R2.4	4000'	250°	
114914	115344	R2.5	5000'		
115759	121633	P3	5000' 400'	070°	Runs 3.1-3.3 within P3
115856	120551	R3.1	4000'	070°	
120618	120940	R3.2	3000'	070°	
121225	121519	R3.3	1000'	070°	
121633	121934	R4.1	400'	070°	
121934	123315	P4	400' 5000'	070°	Runs 4.2-4.4 within P4
122005	122332	R4.2	1000'	070°	
122636	122855	R4.3	3500'	070°	
122921	123220	R4.4	4000'	070°	
123315	123850	R4.5	5000'	075°	
123850	125237	P5	5000' 50'	070°	Runs 5.1-5.3 within P5
123943	124210	R5.1	4000'	070°	
124236	124502	R5.2	3500'	070°	
124817	125050	R5.3	1000'	075°	
125335	125615	R5.4	100'	070°	
131207	131847	P6	5200' 50'	250°	
131847	133550	P7	50' 5200'	255°	Runs 7.1-7.4 within P7
131917	132244	R7.1	100'	240°	
132426	132650	R7.2	1000'	250°	
132953	133131	R7.3	3500'	255°	
133201	133445	R7.4	4000'	255°	
133550	134012	R7.5	5200'	250°	
134012	135150	P8	5200' 50'	245°	Runs 8.1-8.3 within P8
134122	134258	R8.1	4000'	250°	
134325	134518	R8.2	3500'	250°	
134833	134941	R8.3	1000'	250°	
135150	141214	P9	50' 5300'	230°	Runs 9.1-9.4 within P9
135208	135307	R9.1	100'	250°	
135442	135618	R9.2	1000'	240°	
135921	140055	R9.3	3500'	230°	
140121	141058	R9.4	4000'	230°	
141214	141655	R9.5	5300'	260°	
144135	144311	R10.1	5300'	070°	
144311	145513	P10	5300' 50'	070°	Runs 10.2-10.4 within P10
144445	144613	R10.2	4000'	070°	
144755	144906	R10.3	2500'	070°	
145152	145307	R10.4	1000'	075°	
145513	151025	P11	50' 5300'	060°	Runs 11.1-11.4 within P11
145522	145629	R11.1	100'	060°	
145850	150012	R11.2	1000'	060°	
150200	150400	R11.3	2500'	060°	
150732	150900	R11.4	4000'	060°	
151025	151222	R11.5	5300'	070°	
151222	152737	P12	5300' 50'	070°	Runs 12.1-12.3 within P12
151352	151652	R12.1	4000'	070°	
151832	151952	R12.2	2500'	070°	
152207	152514	R12.3	1000'	070°	

152737	154159	P13	50'	5300'	070°	Runs 13.1-13.4 within P13
152745	153151	R13.1	100'		070°	
153342	153500	R13.2	1000'		070°	
153654	153753	R13.3	2500'		070°	
153924	154042	R13.4	4000'		070°	
154159	154353	R13.5	5300'		070°	
155740	155914	R14.1	5300'		250°	
155914	161121	P14	5300'	50'	250°	Runs 14.2-14.4 within P14
160045	160215	R14.2	4000'		250°	
160347	160506	R14.3	2500'		250°	
160738	160903	R14.4	1000'		250°	
161121	162303	P15	50'	5300'	250°	Runs 15.1-15.4 within P15
161128	161235	R15.1	100'		250°	
161412	161526	R15.2	1000'		250°	
161731	161842	R15.3	2500'		250°	
162017	162144	R15.4	4000'		250°	
162303	162710	R15.5	5300'		250°	
162710	163853	P16	5300'	50'	250°	Runs 16.1-16.3 within P16
162840	163000	R16.1	4000'		250°	
163133	163244	R16.2	2500'		250°	
163501	163645	R16.3	1000'		250°	
163853	170335	P17	50'	FL110	240°	Runs 17.1-17.6 within P17
163904	164017	R17.1	100'		240°	
164159	164330	R17.2	1000'		240°	
164553	164708	R17.3	2500'		240°	
164840	164958	R17.4	4000'		240°	
165117	165310	R17.5	5300'		240°	
165342	155805	R17.6	5800'		255°	
170335	172323	R18	FL110		255°	

175702

Land at RAF Lyneham

```

#####1 125800 131016 R1 3000'
0 131016 131345 P1 3000'-FL050
1 131345 132232 R2 FL050
0 132232 133220 P2 FL050-FL150
1 132220 135216 R3 FL150
0 135421 141058 P3 FL150-500'
1 141124 142620 R4 800'-1100'
0 142711 145338 P4 1100'-FL270
1 145507 151156 R5 FL270
0 151304 152507 P5 FL270-FL150
1 152507 154150 R6 FL150

```

# TACIA August 1997

Flight A571

18 August 1997

**OBJECTIVE:** To measure chemical composition of polluted plume at different distanced from land.

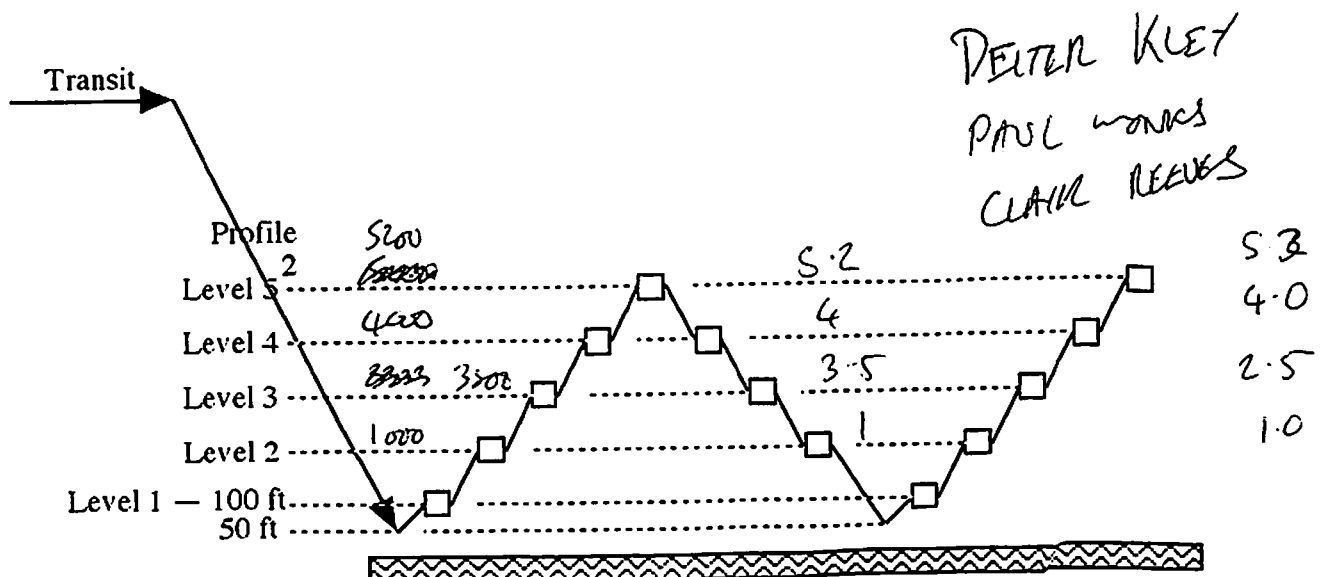
**LOCATION:** Southeastern North Sea.

**WEATHER:** Avoid areas of cloud and precipitation where possible.

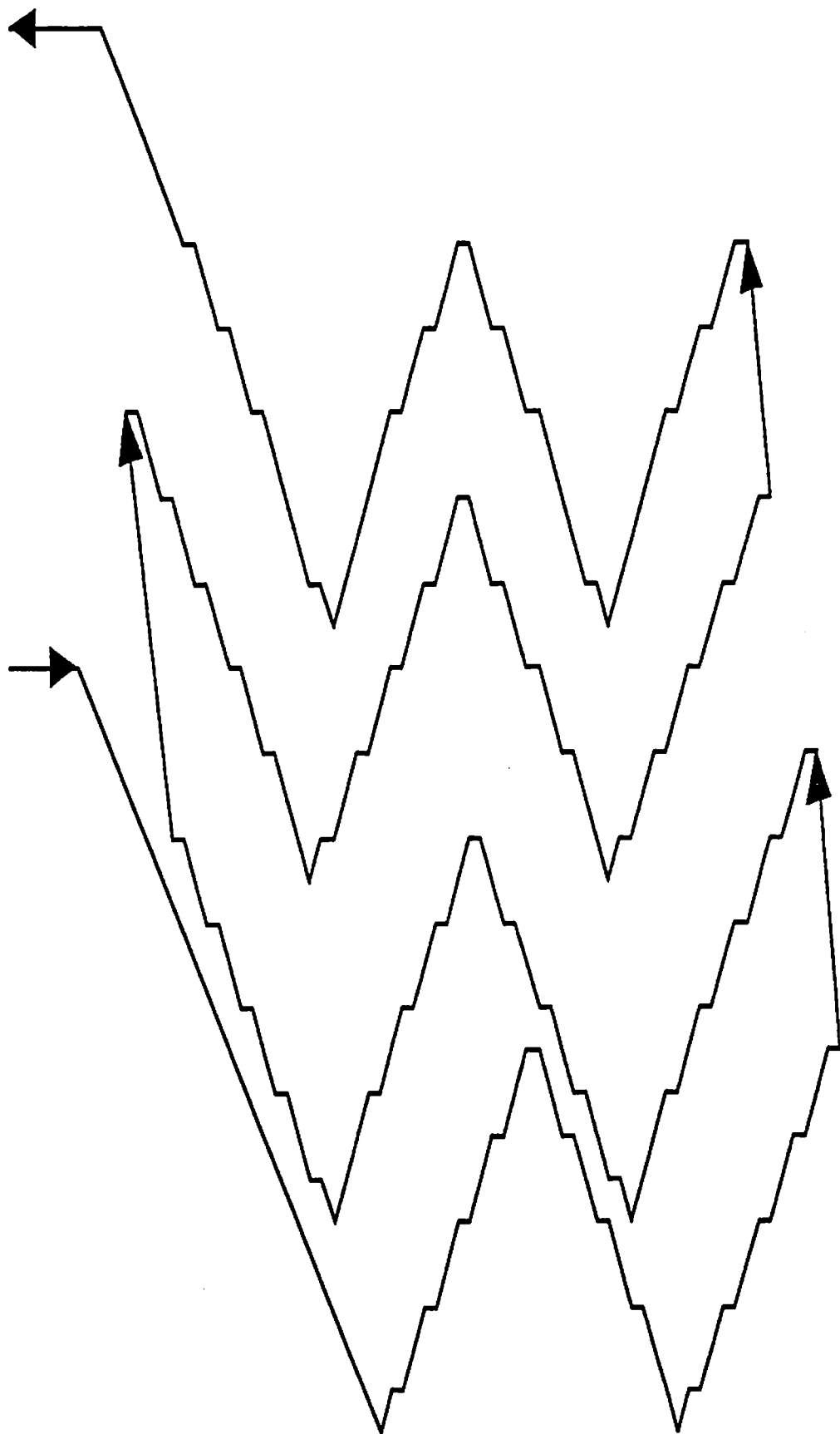
## SAMPLING PATTERN:

- 1] Take-off Lyneham 11:00 local time.
- 2] Ascend to 3000ft and hold for 5 minutes for chemical instrumentation.
- 3] Transit to sampling area as convenient. **(FLIGHT LEVEL 100)**
- 4] 15 minute straight and level run for NOxy Calibration.
- 5] Profile from transit altitude to 50 ft. (Or minimum safe altitude)
- 6] Sawtooth and bottle sampling pattern as shown in diagrams, approximately perpendicular to the wind.
- 7] 15 minute straight and level run for NOxy Calibration.
- 8] Return to Lyneham as convenient.

**OTHER REQUIREMENTS:** Constant cabin pressure on level runs.  
Communications with TACIA Ops required (SATCOM or Phone patch).







# AIRCRAFT FLYING PROGRAMME

DATE 16 August 1997

FLIGHT NO A571

FTI MRF1 TACIA

Aircraft scientist	A Kaye	NOxy	S Bauguitte
Flight leader	I Rule	Peroxide	B Bandy
Cloud physics	M Pickering	Formaldehyde	G Mills
CCN/PSAP/Oz	K Dewey	CO	S Schmitgen
Pan ECGC	J Kent	PERCA	T Green
Bottles	<del>J Pantrey</del>	Project Scientists	X 3

Pre-flight clearance M Pickering / ~~J Pantrey~~ dep 0700

FTOs Depart F'boro 0720

Briefing	0830	Take off	1030	Land at	1830
				Lynham	

Press RETURN for next display (H for help)

NEXT DAY 15-AUG-1997 12:44

+ DEITER KEY  
PAN MARKS  
CLARE REIVES

14 SCIENTISTS + 5 A/C = 19

## POST FLIGHT REQUIREMENTS FORM

Flight No: 4571

Date: 18/8/97

A/S Name: A. KATE

### Aircraft Scientist's Post Flight Requirements:

1. Are any copies of the flight folder required?  
YES ☒ NO ☐ for ..... *SEVERAL* .....
2. Flight data and folders will normally be discarded after 10 years, is this OK?  
YES ☐ NO ☒ If not OK, state period ..... *10 YRS* .....
3. Is the flight part of an international project or major campaign?  
YES ☒ NO ☐ Name of Project ..... *TRACIA* .....
4. Do you want the video tape kept?  
YES ☒ NO ☐ How long? ..... *10 YRS* .....
5. Has the Handheld camera or the Camcorder been used:  
YES ☐ NO ☒  
If yes, do you want the handheld camera film processed:  
immediately ☐ or when the film is finished? ☐
6. Do you want the cloud physics data kept?  
YES ☒ NO ☐  
If yes, which disc / file do you want it stored in? .....
7. Do you want to do the interactive processing?  
YES ☒ NO ☐

### NOTE:

- Members of MRF Radiation and Cloud Physics groups are expected to meet their own requirements for data storage and non-standard processing.
- For non MRF users, Data Management Section will keep the processed data TEMPORARILY until the requirements are made known.
- Any other requirements for post-flight processing and data storage should be discussed with the Data Management Section.
- If copies of the Flight Folder are required, it is the responsibility of the Aircraft Scientist / User to produce them.

# Flight A571 — TACIA

## Monday, 18 August 1997

### Aircraft Scientist Debrief:

The meteorological conditions were dominated by a high pressure cell over Scandinavia and a series of frontal systems approaching in the North Atlantic. The winds in the North Sea were generally slack with a gentle outflow from continental Europe.

The Aircraft Scientist display was not functioning properly, which limited the information available on the flight deck. HORACE locked up halfway through the flight and had to be rebooted. After the restart the A/S display functioned properly, although the Omega Lat/Long read 0,0 through out most of the flight.

The sortie brief was executed to plan with the exception of an additional profile on the first track just north of the German coast. During the flight 64 bottles were filled for later analysis. The mission scientists were very pleased with the flight and it appears to have been a very successful TACIA sortie.



## Interactive Processing Log

Flight No. A571

Date: 18/8/17

User: A. KATE/H. RICHER

Interactive by: I. RICE

Date: 19/8/17

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### Renav

KALWAN FILTERING

### TWC

Profile plotted :

Line chosen : Profile / Whole flight / Other

a = - 0.2334E+1

b = + 0.3604E-2

c = + 0.2448E-6

### LWC

VERY LITTLE CLOUD ENCOUNTERED IN FLIGHT - OCCASIONALLY  
CLIPPED THE TIPS OF CU.

### Heimann / Barnes

ML

# Flight Leader's Pre/In-Flight Check List

Flight No: A571      Date: 18/8/97      Page.....of

CHEK for auto selection

GMT	PARA	NO	D.R.S.	DECODE	INSTRUMENT	EXPECTED VALUES	
						INFLIGHT	PREFLIGHT
	REF +	5	0567	✓		Approx 0568	
	REF -	7	2854	✓		Approx 2858	
	AOSS	19	0000	F/S O/S	TORQUE 4.0	2047 st. and level	
	AOA	18	1522	F/S O/S	TORQUE 3.0	2047 st. and level	
	RD HT	37	0000	✓		As Indicated   0000	
	PR HT	8	3863	300	✓	As Altimeter	
	CABP	14	3299	1000	✓		
	A/S	9	0000	✓		As ASI   0000 - 0100	
	UP1S	81	0390	90			
	UP2S	82	0242	20			
	UIRS	83	0201		↓ NO <sub>2</sub>		
	UP1Z	84	0151	✓		Approx 0147	
	UP2Z	85	0148	✓		Approx 0149	
	UIRZ	86	0210		↓ NO <sub>2</sub>	Approx 2061	
	UP1T	87	2356	} 21		As IAT	
	UP2T	88	2370			As IAT	
	UIRT	89	0200		↓ NO <sub>2</sub>	As IAT	
	LP1S	91	0171	-15			
	LP2S	92	0131	-10			
	LIRS	93	0024		↓ NO <sub>2</sub>		
	LP1Z	94	0101	✓		Approx 0150	
	LP2Z	95	0152	✓		Approx 0146	
	LIRZ	96	0231		↓ NO <sub>2</sub>	Approx 2050	
	LP1T	97	2345	} 21		As IAT	
	LP2T	98	2357			As IAT	
	LIRT	99	0200		↓ NO <sub>2</sub>	As IAT	
	J/W	42	0946			As Indicated   0000	
	HYGR	58	3253	24			
	HYCC	59	0717	✓		696-901	
	FDEW	138	2457	18		DP = (DRSU/20)-100 C	
	FSTA	139	0552				
	DTF	10	1550	21			
	DTC	11	6				
	NDTF	23	1042	21		same as De-Iced	
	NDTC	24	6				
	INCT	48	2501	✓			
	HEIM	141	2650				
	PRTC	142	2383	✓		approx 2380	
	TWCD	70	3469	✓		0000-4094	
	TSAM	72	0702	✓		0640-1860   < min	
	O3	100	0222				
	O3P	106	2030			$P \approx (DRSU \times 0.4) + 145mB$	
	O3RG	113	1294				

## Flight Leaders' Pre/In-Flight Check List

BCDS for auto selection

GMT	PARA.	NO.	H/D	D.R.S.	DECODE	INSTR	EXPECTED VALUE
	FL NO	1	Hex	571			Flight No.
	GMTH	2	Hex	0083			Clock: First 4 No.s
	GMTM	3	Hex	0877			Clock: Last 4 No.s
	E/M	4	Hex	8			Event Mark Counter
	INCH	49	Dec				Multipxd Hkeeping
3705	3854 1452	3705	0473	5704	3681	3703	0745 ✓
	LATC	160	Dec	1220			Latitude
	LONC	161	Dec	0000			Longitude

## Total Water Content Meter Check List

TOTW for auto selection

Height: 8

GMT	PARA	NO	D.R.S.	DECODE	INSTRUMENT	EXPECTED VALUES	
						INFLIGHT	PREFLIGHT
	TWCD	70	3454	✓		0001-4095	
	TNOS	71	1202	✓		2000-3460	< min
	TSAM	72	0201	✓		0640-1860	< min
	TAMB	73	2562	✓		2400-3200	
	TSRC	74	2262	✓		2160-2470	
	HTR1	75	2077	} SPACE ✓		0000-4095	< 4095
	HTR2	76	2119			0000-4095	< 4095
	ISRC	77	1026			0001-1230	< min
	STAT	78	4088	✓		4095	
	EV1V	170	2042				
	EV2V	171	2043				
	NPWR	172	3355				
	EVIC	173	3968				
	EV2C	174	5968				

BROAD BAND RADIOMETER FIT

(pre-Flight only)

	PARA NO	POSITION	DOME	COVERS	OBSCURERS
UPPER	81,84,87	Port	Clear	Off / On	Large / Small
	82,85,88	Stbd	Red		
	83,86,89	Centre	Silicon ✓		
LOWER	91,94,97	Port	Clear	Off / On	
	92,95,98	Stbd	Red		
	93,96,99	Centre	Silicon ✓		

# Flight Leader's Pre ~~In~~-Flight Check List

Flight No: A571

Date: 18/8/97

Page...2...of

CHEK for auto selection

GMT	PARA	NO	D.R.S.	DECODE	INSTRUMENT	EXPECTED VALUES	
						INFLIGHT	PREFLIGHT
	REF +	5	0567	✓		Approx 0568	
	REF -	7	2854			Approx 2858	
	AOSS	19	1899	✓	F/S O/S TORQUE	2047 st. and level	
	AOA	18	0729	✓	F/S O/S TORQUE	2047 st. and level	
	RD HT	37	4095	7500		As Indicated	0000
	PR HT	8	2697	98k		As Altimeter	
	CABP	14	3226	072	✓ 971		
	A/S	9	1353	180		As ASI	0000 - 0100
	UP1S	81	2268	760	✓		
	UP2S	82	1902	752	✓		
	UIRS	83	00875		JNO <sub>2</sub>		
	UP1Z	84	0155	✓		Approx 0147	
	UP2Z	85	0148	✓		Approx 0149	
	UIRZ	86	0879		JNO <sub>2</sub>	Approx 2061	
	UP1T	87	2659	7		As IAT	
	UP2T	88	2620	7		As IAT	
	UIRT	89	0220		JNO <sub>2</sub>	As IAT	
	LP1S	91	0598	187			
	LP2S	92	0542	180			
	LIRS	93	0203		JNO <sub>2</sub>		
	LP1Z	94	0150	✓		Approx 0150	
	LP2Z	95	0153	✓		Approx 0146	
	LIRZ	96	0650		SNO <sub>2</sub>	Approx 2050	
	LP1T	97	2698	7		As IAT	
	LP2T	98	2690	7		As IAT	
	LIRT	99	0220		JNO <sub>2</sub>	As IAT	
	J/W	42	1207	0.0		As Indicated	0000
	HYGR	58	2232	7.0			
	HYCC	59	0770	✓		696-901	
	FDEW	138	1792	-11		DP = (DRSU/20)-100 C	
	FSTA	139	0608				
	DTF	10	2265	7			
	DTC	11	5				
	NDTF	23	2602	8		same as De-Iced	
	NDTC	24	5				
	INCT	48	2572				
	HEIM	141	2686				
	PRTC	142	3264	??		approx 2380	
	TWCD	70	1209	✓		0000-4094	
	TSAM	72	1091	✓		0640-1860	< min
	O3	100	036				
	O3P	106	1588			P ≈ (DRSU × 0.4) + 145mB	
	O3RG	113	2171				



## Flight Leaders' Pre/In-Flight Check List

BCDS for auto selection

GMT	PARA.	NO.	H/D	D.R.S.	DECODE	INSTR	EXPECTED VALUE
	FL NO	1	Hex	571			Flight No.
	GMTH	2	Hex	0710			Clock: First 4 No.s
	GMTM	3	Hex	0804			Clock: Last 4 No.s
	E/M	4	Hex	0011			Event Mark Counter
	INCH	49	Dec				Multipxd Hkeeping
3161	2856 1572	3164	0800	3177	3724	3179	0760 ✓
	LATC	160	Dec	0598	52		Latitude
	LONC	161	Dec	0021	2		Longitude

## Total Water Content Meter Check List

TOTW for auto selection

Height: ↓

GMT	PARA	NO	D.R.S.	DECODE	INSTRUMENT	EXPECTED VALUES	
						INFLIGHT	PREFLIGHT
	TWCD	70	1529			0001-4095	
	TNOS	71	2602			2000-3460   < min	
	TSAM	72	1205			0640-1860   < min	
	TAMB	73	2803			2400-3200	
	TSRC	74	2272			2160-2470	
	HTR1	75	2709			0000-4095   < 4095	
	HTR2	76	1045			0000-4095   < 4095	
	ISRC	77	6023			0001-1230   < min	
	STAT	78	4095			4095	
	EV1V	170	2489				
	EV2V	171	3158				
	NPWR	172	2659				
	EVIC	173	4007				
	EV2C	174	6007				

BROAD BAND RADIOMETER FIT

(pre-Flight only)

	PARA NO	POSITION	DOMES	COVERS	OBSCURERS
UPPER	81,84,87	Port	Clear	Off / On	Large/Small
	82,85,88	Stbd	Red		
	83,86,89	Centre	Silicon		
LOWER	91,94,97	Port	Clear	Off / On	
	92,95,98	Stbd	Red		
	93,96,99	Centre	Silicon		

# Flight Leader's In-Flight Log

Flight No A 571.....

Date 18/8/97.....

Page 1..... of 5.....

Video Tape
No. A571 #1
Ends 1432
(FFC) / DFC / RFC

	GPS	INU
Lat	51 30.40N	51 30.40N
Long	001 54.8W	001 54.20W
Time	0818	0819
Status	S3	← ALIGN

DRS recording to HORACE	(y) n
HORACE recording to disc	(y) n
SATCOM sending pos. reports	(y) n

ON PAN (1) LYNEHAM

GMT	EVM	Height	QNH	Hdg	IAS	TAT	DP	DI Htr	Wind/ Sea st.
074812			DATA ON						
095700			SET INU TO NAV						
101810			TO LYNEHAM						
			START RUN						
103441	9	FL100		070	180	4.8	-16	OFF	
				END RUN					
105500	10	FL100		<del>070</del> 180	1.8		-2	OFF	
				START PROFILE 1			↓		
110801	11	FL100		090	180				
				END P1					
111854	13	250	1012						SS=1
				START RUN	2.1				
112540	14	350		070					
				END RUN	2.1 / START PROFILE 2		↗		
112920	15	400							
				START RUN	2.2				
113024	16	1000		070	190				
			RESUME P2 /	END RUN	2.2				
113252	18	1000		070					
			INTERUPT P2 /	START RUN	2.3				
113534	20	3000		065					
				END RUN	2.3				(P2 STILL INTERRUPTED)
115737	21	3000							

Video Tape	
No.	A571 #1
Ends	1432
(FFC) / DFC / RFC	

	GPS	INU
Lat	53 03.60N	53 04.93N
Long	003 06.60E	003 04.08E
Time	1147	1148
Status	S's	NAV

DRS recording to HORACE	(y) / n
HORACE recording to disc	(y) / n
SATCOM sending pos reports	(y) / n

GMT	EVM	Height	QNH	Hdg	IAS	TAT	DP	DI Htr	Wind/ Sea st.
114315	22	3000	RESTART P2	250	128	17.2			
114415	23	4000	INTERLUPT P2 / START RUN 2.4						
114814	24	4000	END RUN 2.4 / RESTART P2						
114914	25	5000	(END) INTERLUPT P2 / START RUN 2.5						
115344	26	5000	END RUN 2.5						
115759	27	5000	START PROFILE 3						
115836	28	4000	INTERLUPT P3 / START RUN 3.1	070	175				
120521	29	4000	RESTART P3 / END RUN 3.1	070					
120618	30	3000	INTERLUPT P3 / START RUN 3.2	070					
120640	31	3000	END RUN 3.2 / RESTART P3						
121225	33	1000	INTERLUPT P3 / START RUN 3.3	070					
121519	34	1000	END RUN 3.3 / RESTART P3	070					
121633	35	400	END P3 / START <del>P3</del> RUN 4.1	1022					SS=1
121934	36	600	END RUN 4.1 / START PROFILE 4	070					
122005	37	1000	INTERLUPT P4 / START RUN 4.2	070					
122332	38	1000	END RUN 4.2 / RESTART P4						

# Flight Leader's In-Flight Log

Flight No A 571

Date 18/8/17

Page 2 of 5

Video Tape	
No.	AS71#1
Ends	1432
FFC / DFC / RFC	

	GPS	INU
Lat		
Long		
Time		
Status		

DRS recording to HORACE	(y)/n
HORACE recording to disc	(y)/n
SATCOM sending pos. reports	(y)/n

GMT	EVM	Height	QNH	Hdg	IAS	TAT	DP	DI Htr	Wind/ Sea st.
			INTERUPT P4 / START RUN 4.3						
122636	40	3500		070					
			END RUN 4.3 / RESUME P4						
122835	41	3500							
			INTERUPT P4 / START RUN 4.4						
122921	42	4000		070					
			END RUN 4.4 / RESUME P4						
123220	43	4000		070					
			INTERUPT P4 / START RUN 4.5						
123315	44	3000		075					
			END RUN 4.5 / START PROFILE 5						
123850	45	5000							
			INTERUPT P5 / START RUN 5.1						
123943	46	4000							
			END RUN 5.1 / RESUME P5						
124210	47	4000							
			INTERUPT P5 / START RUN 5.2						
124236	48	3500		070					
			END RUN 5.2 / RESUME P5						
124502	49	3500							
			INTERUPT P5 / START RUN 5.3						
124817	51	1000		075					
			END RUN 5.3 / RESUME P5						
125050	52	1000							
			END P5 / START RUN 5.4						
125237	53	50'							
			INTERUPT P6 / START RUN 5.4						
125335	54	100'		102					
			END RUN 5.4 / RESUME P6						
125615	55	100'							



Video Tape	
No.	AST1#1
Ends	1432
(FFC) / DFC / RFC	

	GPS	INU
Lat	54 55.93N	54 59.41N
Long	007 5738E	007 55.51E
Time	1306	1200
Status	5's	NAV

DRS recording to HORACE	(y) n
HORACE recording to disc	(y) n
SATCOM sending pos reports	(y) n

. GMT	EVM	Height	QNH	Hdg	IAS	TAT	DP	DI Htr	Wind/ Sea st.
131207	56	5200'	<del>INTERUPT P6</del>	250			START PROFILE P6		
131847	58	50'					END PROFILE P6 / START P7		
131917	59	100'		240			INTERUPT P7 / START RUN 7.1		
132244	60	100'		250			END RUN 7.1 / RESTART P7		
132426	61	10250		250	185		INTERUPT P7 / START RUN 7.2		
132650	62	10200					END RUN 7.2 / RESTART P7		
132953	64	3800		255	185		INTERUPT P7 / START RUN 7.3		
133131	65	3800					END RUN 7.3 / RESTART P7		
133207	66	4050		255			INTERUPT P7 / START RUN 7.4		
133445	67	4080		255			END RUN 7.4 / RESTART P7		
133550	68	5200		250			INTERUPT P7 / START RUN 7.5		
134012	69	5200		245			END RUN 7.5 / START P8 ↓		
134122	70	4080		250			INTERUPT P7 / START RUN 8.1		
134258	71	4080					<del>INTERUPT P8</del> END RUN 8.1 / RESTART P8		
134325	72	3500					INTERUPT P8.1 / START RUN 8.2		
134518	73	3500		250	180		END RUN 8.2 / RESTART P8		
134833	75	1000		250			INTERUPT P8 / START RUN 8.3		

VILLIENS INN  
WYOMINGTON

# Flight Leader's In-Flight Log

Flight No A 571.....

Date 18/8/97.....

Page 3 of 5.....

<b>Video Tape</b>
No. A571#1
Ends 1432 (1720)
(FFC) / DFC / RFC

	<b>GPS</b>	<b>INU</b>
Lat		
Long		
Time		
Status		

<b>DRS</b> recording to HORACE <input checked="" type="checkbox"/> y / n
<b>HORACE</b> recording to disc <input checked="" type="checkbox"/> y / n
<b>SATCOM</b> sending pos. reports <input checked="" type="checkbox"/> y / n

GMT	EVM	Height	QNH	Hdg	IAS	TAT	DP	DI Htr		Wind/ Sea st.
			END RUN 8.3 / RESUME P8							
134441	76	1000								
			END P8 / START P9							
135150	77	50'	1022							SS=1
			INTERUPT P9 / START RUN 9.1							
135208	78	100'		250						
			END RUN 9.1 / RESUME P9							
135307	79	100'								
			INTERUPT P9 / START RUN 9.2							
135442	80	1000		240						
			END RUN 9.2 / RESUME P9							
135615	81	1000'		230						
			INTERUPT P9 / START RUN 9.3							
135824	82	3500		230						
			END RUN 9.3 / RESUME P9							
140055	84	3500								
			INTERUPT P9 / START RUN 9.4							
140121	85	4000'								
			END RUN 9.4 / RESUME P9							
14058	86	4000		230						
			INTERUPT P9 / START RUN 9.5							
141214	87	5300		260						
			END RUN 9.5 / <del>START P9.6</del>							
141655	88	5300								
142545	89	END VIDEO A571#1 CAMT = ST94								
142623	90	START VIDEO A571#2 CAMT = 0000								
			START <del>CHARGE</del> RUN 10.1							
144435	91	5300		070						

Video Tape	
No.	AST 122
Ends	1720
(FFC) / DFC / RFC	

	GPS	INU
Lat		
Long		
Time		
Status		

DRS recording to HORACE	(y) n
HORACE recording to disc	(y) n
SATCOM sending pos reports	y / n

GMT	EVM	Height	QNH	Hdg	IAS	TAT	DP	DI Htr		Wind/ Sea st.
			END RUN 10.1 / START P10 ↓							
144311	92	3300	INTERUPT P10 / START RUN 10.2							
144445	93	4000	070 END RUN 10.2 / RESTART P10							
144613	94	4000	070 INTERUPT P10 / START RUN 10.3							
144755	95	2500	END RUN 10.3 / RESTART P10 ↓							
144906	96	2500	070 INTERUPT P10 / START RUN 10.4							
145152	98	1000	075 END RUN 10.4 / RESTART P10							
145307	99	1000	END P10 / START P11 ↗							
145513	100	50'	1022 INTERUPT P11 / START RUN 11.1							
145522	101	100'	060 END RUN 11.1 / RESTART P11							
145624	102	100'	INTERUPT P11 / START RUN 11.2							
145850	103	1000	060 END RUN 11.2 / RESTART P11							
150012	104	1000	INTERUPT P11 / START RUN 11.3							
150200	106	2500	END RUN 11.3 / RESTART P11							
150600	107	2500	060 INTERUPT P11 / START RUN 11.4							
150732	108	4000	END RUN 11.4 / RESTART P11							
150900	109	4000	INTERUPT P11 / START RUN 11.5							
151025	110	5300	070							

Research Flight

1820Z ETA

# Flight Leader's In-Flight Log

Flight No **A 571**..... Date **18/8/97**..... Page **4**.... of **5**.....

Video Tape	
No.	<b>A571 #2</b>
Ends	<b>1726</b>
<b>(FFC) / DFC / RFC</b>	

	GPS	INU
Lat		
Long		
Time		
Status		

<b>DRS</b> recording to HORACE	<b>(y) n</b>
<b>HORACE</b> recording to disc	<b>y / n</b>
<b>SATCOM</b> sending pos. reports	<b>y / n</b>

GMT	EVM	Height	QNH	Hdg	IAS	TAT	DP	DI Htr		Wind/ Sea st.
			END RUN 11.5 / START PROFILE				P12	↓		
151222	111	5300		070						
			INTERLUPT P12 / START RUN 12.1							
151352	112	4000'		070						
			END RUN 12.1 / RESTART P12							
151652	113	4000								
			INTERLUPT P12 / START RUN 12.2							
151832	114	2500		070						
			END RUN 12.2 / RESTART P12							
151952	115	2500		070						
			INTERLUPT P12 / START RUN 12.3							
152207	117	1000		070						
			END RUN 12.3 / RESTART P12							
152514	118	1000								
			END P12 / START P13							
152757	119	50'		1022						1
			INTERLUPT P13 / START RUN 13.1							
152745	120	100'								
			END RUN 13.1 / RESTART P13							
153157	121	100'								
			INTERLUPT P13 / START RUN 13.2							
153342	122	1000		070						
			END RUN 13.2 / RESTART P13							
153500	123	1000		070						
			INTERLUPT P13 / START RUN 13.3							
153654	124	2500		070						
			END RUN 13.3 / RESTART P13							
153753	125	2500								
			INTERLUPT P13 / START RUN 13.4							
153924	126	1000		070						

<b>DRS</b> recording to HORACE	y / n
<b>HORACE</b> recording to disc	y / n
<b>SATCOM</b> sending pos reports	y / n

## VIDEO TAPE LOG

Flight No **A** A571.....

Project TACIA

Date 18/8/97

Tape No AS71#2 User A. KATZ

Retention Period ..... INDEF .....

[illegible]

## VIDEO TAPE LOG

Flight No **A** 571.....

Project TACIA

Date 12/8/97

Tape No A571#1 User A. KATZ

Retention Period INDEX.....[illegible]

# PAN GC Log

GC Sample record			Flight Number: <i>AST1</i>					Operator: <i>Coss</i>								Date: <i>18/8/97</i>			
Sample	Time	Height	Channel 1					Channel 2				Channel 3				Comments			
No.			Optimisation = <i>8</i>					Optimisation = <i>8</i>				Optimisation = <i>8</i>				<i>Ch1 &amp; 3 did not optimize. Ch2 opt on 6.</i>			
			Back Flush = <i>42</i>					Back Flush = <i>42</i>				Back Flush = <i>40</i>							
			Flow rate = <i>40</i>					Flow rate = <i>42</i>				Flow rate = <i>41</i>							
			ST	SP	DT	DP	BT	ST	SP	DT	DP	ST	SP	DT	DP				
					<i>387</i>	<i>1076</i>				<i>30.7</i>	<i>1125</i>			<i>28.5</i>	<i>1164</i>				
<i>#1</i>	<i>112200</i>	<i>300'</i>	<i>521</i>	<i>603</i>				<i>494</i>	<i>693</i>			<i>472</i>	<i>-72</i>			<i>Run 2.1</i>			
<i>#2</i>	<i>113045</i>	<i>1000</i>	<i>520</i>	<i>592</i>				<i>495</i>	<i>682</i>			<i>469</i>	<i>-72</i>			<i>R2.2</i>			
<i>#3</i>	<i>113610</i>	<i>3000'</i>	<i>519</i>	<i>546</i>				<i>493</i>	<i>628</i>			<i>467</i>	<i>-67</i>			<i>R2.3</i>			
<i>#4</i>	<i>114435</i>	<i>4000'</i>	<i>518</i>	<i>526</i>				<i>489</i>	<i>606</i>			<i>465</i>	<i>-68</i>			<i>R2.4</i>			
<i>#5</i>	<i>114915</i>	<i>5000'</i>	<i>519</i>	<i>510</i>				<i>488</i>	<i>583</i>			<i>463</i>	<i>-68</i>			<i>R2.5</i>			
<i>#6</i>	<i>115957</i>	<i>4000'</i>	<i>521</i>	<i>527</i>				<i>486</i>	<i>607</i>			<i>461</i>	<i>-69</i>			<i>R3.1</i>			
<i>#7</i>	<i>120644</i>	<i>3000'</i>	<i>520</i>	<i>549</i>				<i>484</i>	<i>633</i>			<i>459</i>	<i>-72</i>			<i>R3.2</i>			
<i>#8</i>	<i>121235</i>	<i>1000'</i>	<i>519</i>	<i>592</i>				<i>483</i>	<i>685</i>			<i>456</i>	<i>-68</i>			<i>R3.3</i>			
<i>#9</i>	<i>121740</i>	<i>550'</i>	<i>519</i>	<i>594</i>				<i>487</i>	<i>691</i>			<i>457</i>	<i>-68</i>			<i>R4.1</i>			
<i>#10</i>	<i>122650</i>	<i>3500'</i>	<i>519</i>	<i>538</i>				<i>480</i>	<i>622</i>			<i>456</i>	<i>-69</i>			<i>R4.3</i>			
<i>#11</i>	<i>123330</i>	<i>5000'</i>	<i>511</i>	<i>511</i>				<i>480</i>	<i>588</i>			<i>457</i>	<i>-68</i>			<i>R4.4</i>			
<i>#12</i>	<i>125530</i>	<i>100'</i>	<i>518</i>	<i>697</i>				<i>471</i>	<i>706</i>			<i>456</i>	<i>-69</i>			<i>R5.4</i>			

Negative peaks in



# PAN GC Log

GC Sample record			Flight Number: <u>AST1</u>					Operator: <u>Doss</u>								Date: <u>18/8/97</u>	
Sample No.	Time	Height	Channel 1					Channel 2				Channel 3				Comments	
			Optimisation = <u>4</u>					Optimisation = <u>8</u>				Optimisation = <u>8</u>					
			Back Flush =					Back Flush =				Back Flush =					
			Flow rate =					Flow rate =				Flow rate =					
ST	SP	DT	DP	BT	ST	SP	DT	DP	ST	SP	DT	DP					
#13	131925	100'	520	607				481	706			458	-74			127.1	
#14	132434	1000'	520	550				481	688			458	-71			127.2	
#15	132800	3500'	520	536				481	623			458	-72			127.3	
#16	133615	5200'	520	507				481	581			458	-66			127.5	
#17	134335	3500'	519	536				482	622			459	-70			128.2	
#18	135215	100'	520	607				482	706			459	-69			129.1	
#19	135930	3500'	520	537				481	619			458	-69			129.3	
#20	141214	5200'	520	501				481	577			457	-67			129.5	
#21	141940	5200'	518	513				477	589			454	-7			130.1	
#22	142430	4000'	519	524				475	605			451	-68			140.2	
#22	143152	4000'	519	581				474	683			451	-70			140.4	
#23	144930	1000'	519	589				473	686			459	-71			141.2	
#24	151843	2500'	519	588				474	646			459	-70			142.2	

# PAN GC Log

GC Sample record			Flight Number: <u>AS71</u>					Operator: <u>JSS</u>					Date: <u>18/8/97</u>				
Sample No.	Time	Height	Channel 1					Channel 2				Channel 3				Comments	
			Optimisation =					Optimisation =				Optimisation =					
			Back Flush =					Back Flush =				Back Flush =					
			Flow rate =					Flow rate =				Flow rate =					
			ST	SP	DT	DP	BT	ST	SP	DT	DP	ST	SP	DT	DP		
#15	152610	100'	518	609				472	712				449	74			R13.1
#16	153715	2500'	519	558				472	648				449	-71			R13.3
#17	154300	5300'	518	603				472	560				440	-73			
#18	154858	5300'	518	501				470	560				447	-72			R14.1
#19	160412	2500'	518	558				465	645				447	-79			R14.3

# SAMPLE BOTTLE RECORD

 Flight No. A571

 Date 10/8

 Sheet no. 1/6

Sample no.	Bottle no.	Time	E/M	Height	PRESSURE			True pressure (mb)	Remarks (Run No. etc.)
					PURGE TIME	FILL TIME	END TIME		
1	R13		↙	400'	112645	112850	112857	2.5	RUN 2.1
2	R28 <del>R13</del>		↗	1000	113030	113230	113245	"	2.2
3	R13		↗	3000	113540	113740	113750	"	2.3
4	R9		↗	4000	114420	114620	114630	"	2.4
5	R42		↗	5000	114924 <del>114924</del>	115125	115132	"	2.5
6	R32		↘	4000	115856	120100	120125	"	3.01
7	R38		↘	3000	120618 <del>120618</del>	120820	120835	"	3.2
8	R25		↘	1000	121225	121428	121440	"	3.3
9	R14 <del>R4</del>		↘	RAD 550'	121715	121915	121925		4.01
10	R23		↗	1000	122030	122230	122240		4.02
11	R4		↗	3500	122638	112840	112850		4.3
12	R5		↗	4000	122945	123148	113200		4.4

# SAMPLE BOTTLE RECORD

Flight No. A571

Date 18/8/97

Sheet no. 2/6

Sample No.	Bottle no.	Time	E/M	Height	PRESSURE			True pressure (mb)	Remarks (Run No. etc.)
					PURGE TIME	FILL TIME	END TIME		
13	R37		↗	5000	123315	123520	123535	2.5	4.5
14	R29		↘	4000	123943	124145	124200		5.1
15	R26		↘	3500	124240	124440	124455		5.2
16	R6		↘	1000	124818	125020	125040		5.3
7	R30		↘	100	125337	125540	125550		WAS-4?
18	N <del>R</del> 615			100	131917	132220	132230	2.5	<u>NILU BOTTLES</u> 7.1
19	N 306		↗	1000	132425	132630	132640		7.2
20	S07		↗	3500	132955	133120	133130		7.3
21	N 25.I		↗	4000	1332	133430	133440	4	7.4
22	N 16		↗	5200	133500	133650	133700		7.5
23	N 500		↘	4000	134122	134240	134250		8.1
24	N 7		↘	3500	134325	134450	134500		8.2

# SAMPLE BOTTLE RECORD

Flight No. **A571**      Date **18/8/97**      Sheet no. **3/6**

Sample No.	Bottle no.	Time	E/M	Height	PRESSURE			True pressure (mb)	Remarks (Run No. etc.)
					PURGE TIME	FILL TIME	END TIME		
5.	N 328		↓	1000'	134833	134940	134980	2.5	8.3
6.	N 308		↓	100'	135208	135250	135300	"	9.1
7	N <del>336</del> 336		↗	1000'	135442	135530	135542	"	9.2
8	N 531		↗	3500'	135921	140030	140040	"	9.3
9	N 613		↗	4000'	140110	140235	140248	"	9.4
30	N 501		↗	5300'	141215	141255	141315	"	9.5
31	N 901		→	5300'	144135	144250	144300	"	10.1
32	N 311		↘	4000'	144445	144555	144605	"	10.2
33	N 4.		↘	2500'	144755	144840	144858	"	10.3
34	N 614		↘	1000'	145152	145250	145300	"	10.4
35	N 503		↘	100'	145522	145610	145627	"	10.5 11.01
36	N 506		↗	100'	1458	145955	150005		11.2

# SAMPLE BOTTLE RECORD

 Flight No. AS1

 Date 18/8/97

 Sheet no. 4/6

Sample no.	Bottle no.	Time	E/M	Height	PRESSURE			True pressure (mb)	Remarks (Run no. etc.)
					PURGE TIME	FILL TIME	END TIME		
37	N 505		↗	2500'	150200	150258	150305	205	11.3
38	N 191		↗	4000'	150732	150848	150855	"	11.4
39	N 315		↗	5300'	151010	151125	151140	"	11.5
40	N 105		↘	4000'	151352	151510	151525		12.1
41	N 302		↘	2500'	151832	151925	151945		12.2
42	N 61		↘	1000'	152207	152255	152310		12.3
43	N 60		↘	100'	152745	152845	152855		<del>12.4</del> 13.01
44	N 322		↗	1000'	153342	153445	153455		13.2
45	N 314		↗	2500'	153634	153730	153745		13.3
46	N 81		↗	4000'	153924	154025	154035		13.4
47	N A06		↗	5300'	154159	154315	154325		13.5
48	N 681		↗	5300'	15574	155840	155855		14.01

ST 0715  
KL  
WD

# SAMPLE BOTTLE RECORD

Flight No. 4571 Date 18/8/97 Sheet no 5/6

Sample No.	Bottle No.	Time	E/M	Height	PRESSURE			True pressure (mb)	Remarks (Run No. etc.)
					PURGE TIME	FILL TIME	END TIME		
49	N 9I		↘	4000	1601	160150	160205	2.5	14.2
50	N 314		↘	2500'	1604	160445	160455	"	14.3
51	N 5I		↘	1000'	1608	160845	160855	"	14.4
52	N 34I		↘	100'	161128	161200	161220	"	15.1
53	N 17I		↗	1000	161412	161500	161518	"	15.2
54	N 318		↗	2500'	161731	161825	161838	"	15.3
55	N 327		↗	4000	162017	16205	162125	"	15.4
56	N 100		↗	5300'	162303	162400	162415		15.5
57	N 324		↘	4000'	162840	162945	162955		16.1
58	N 325		↘	2500	163133	163225	163238		16.2
59	N 57		↘	1000'	163501	163625	163640		16.3
60	N 40I		↘	100'	163904	163950	164010		17.1

## SAMPLE BOTTLE RECORD

Flight No. 4571

Date 10/8/97

Sheet no 6 / 6

[illegible]



46

Page 1 of 8

[illegible]

# CLOUD FILLS HIS EYES

Flight No. A571

Date: 18 & 97

Operator: WFO

Page 2 of 8

[illegible]

# CLOUD PHYSICS LOG

Flight No. A571

**Date:** 18/8/97

Operator: *mf*

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[illegible]

## CLOUD TRANSACTIONS LOG

Flight No. A571

Date: 10/8/97

Operator: *MP*

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G.M.T.		PCASP		FSSP			2D-C			HVPS / 2D-P			REMARKS
DRS Time	Conc/cc	Mean R.	Conc/cc	Max Size	Reff	Conc/L	Max Size	Habit	Conc/m <sup>3</sup>	Max Size	Habit		
123131												end & Run	
133200	1160	0.11										Start Run 7.4 @ 4000'	
133340	1085	0.11											
133415												end & Run	
133534	670	0.12										5000'	
133544												Start Run 7.5 @ 5200'	
133600	830	0.12											
133600	450	0.12											
133613												end & Run Start P8	
133613												Start Run 8.1 @ 4000'	
133600	1150	0.13											
133600												end & Run	
133635												Start Run 8.2 @ 3500'	
134400	600	0.10											
134519												end & Run	
134533												Start Run 8.3 @ 1000'	
134900	1200	0.11	0.2	5									
134941												end & Run	
135008												Start Run 8.4 @ 100'	
135300	970	0.11	0.2	5									
135307												end & Run	
135331												Start Run 9.2 @ 1000'	
135500	1070	0.11											
135516												end & Run	
135921												Start Run 9.3 @ 3500	
140000	260	0.11											
140043												end & Run	
140121												Start Run 9.4 @ 4000'	
140800	80	0.09											
141053												end & Run	
141214												Start Run 9.5 @ 5300	
141300	30	0.09											
141500	50	0.08											
141700												end & Run	
141735												Start Run 10.1 @ 5300'	

Flight No. A-571

Date: 18/8/97

Operator: MP

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J.M.T. TS Time	PCASP		FSSP			2D-C			HVPS / 2D-P			REMARKS
	Conc/cc	Mean R	Conc/cc	Max Size	Reff	Conc/L	Max Size	Habit	Conc/m <sup>3</sup>	Max Size	Habit	
14310												end of Run
14446												Start Run 10.2 @ 4000'
14500	1700	0.11										end of Run
14613												3000'
14727	1800	0.11										Start Run 10.3 @ 2500'
14754												
14800	1700	0.11	0.02	5								ad of Run
14906												3000'
14944	1400	0.12										1000' & Start Run 10.6
15151												
15200	1300	0.12	0.02	5								end of Run
15306												end of P @ 100'
15393												Start Run 11.1 @ 100'
15502												
15600	1350	0.12	0.2	5								end of Run
15628												Start Run 11.2 @ 1000'
15700	1000	0.14	0.2	5								
15900	1250	0.12	0.2	10								end of Run
16019												Start Run 11.3 @ 2500'
16200	610	0.09										
16400	470	0.11										end of Run
16600												Start Run 11.4 @ 4000'
16742												
16800	1000	0.10										end of Run
170534												Start Run 11.5 @ 5300'
171085												
171100	800	0.10	0.04	5								end of Run
17308												5000'
17445	870	0.10										Start Run 12.1 @ 4000'
17354												
17400	380	0.11										end of Run
17651												3000'
17806	1470	0.12										2500' Start Run 12.2
17844												
17900	1225	0.12	0.02	5								

Flight No. A571

Date: 18/8/97

Operator: MPO

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G.M.T.		PCASP		FSSP			2D-C			HVPS / 2D-P			REMARKS
DRS Time	Conc/cc	Mean R.	Conc/cc	Max Size	Reff	Conc/L	Max Size	Habit	Conc/m <sup>3</sup>	Max Size	Habit		
151900												end of Run	
152030	1000	0.12										2000'	
152205												1000' Start Run 12.3.	
152300	1000	0.12										end of Run	
152516												500'	
152708	1845	0.11										end of P @ 50'	
152740												Start Run 13.1 @ 100'	
152745													
152800	1300	0.10										end of Run	
153000												Start Run 13.2 @ 1000'.	
153316													
153400	960	0.11										end of Run.	
153437												Start Run 13.3 @ 2500'	
153654													
153700	1280	0.12										end of Run.	
153800												Start Run 13.4 @ 4000'	
153924													
154000	1060	0.12										end of Run.	
154041												Start Run 13.5 @ 5300'	
154200													
154300	1300	0.11	0.02	10								end of Run	
154350												Start Run 14.1 @ 5300	
154740													
154800	77	0.09	0.02	5								end of Run	
154900												Start Run 14.2 @ 4000'	
160046													
160100	450	0.12	0.05	5								end of Run	
160216												Start Run 14.3 @ 2500'	
160348													
160400	610	0.11	0.02	5								end of Run	
160508												Start Run 14.4 @ 1000'	
160738													
160800	730	0.11										end of Run.	
160900													
161021	800	0.11										500'	
161121	876	0.1	0.1	5								60'	

# CLOUD PHASIS LOG

Flight No. A571

**Date:** 18/8/97

Operator: *MC*

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Flight NO. 1571		Date: 8/8/17		Operator: [unclear]								
I.M.T.		PCASP		FSSP		2D-C			HVPS / 2D-P			REMARKS
S Time	Conc/cc	Mean R	Conc/cc	Max Size	Reff	Conc/L	Max Size	Habit	Conc/m <sup>3</sup>	Max Size	Habit	
61128	780	0.11	0.02	5								Start Run 15.1 @ 100'
61260	710	0.11										end of Run
61238												Start Run 15.2 @ 1000'
61413												end of Run
61500	650	0.11										Start Run 15.3 @ 2500'
61584												end of Run
61731												Start Run 15.4 @ 4000'
61800	745	0.12										end of Run
61845												Start Run 15.5 @ 5200'
62016												end of Run
62100	470	0.10										Start Run 16.1 @ 4000'
621115												end of Run
62303												Start Run 16.2 @ 2500'
62400	390	0.10										end of Run
62600	350	0.10										Start Run 16.3 @ 1000'
62711												end of Run
62841												Start Run 17.1 @ 100'
62900	1500	0.11										end of Run
62954												Start Run 17.2 @ 1000'
63133												end of Run
63200	570	0.10										Start Run 17.3 @ 2500'
63244												end of Run
63301												Start Run 17.4 @ 4000'
63600	1195	0.13										end of Run
63645												Start Run 17.5 @ 1000'
63924												end of Run
64000	1150	0.12										Start Run 17.6 @ 1000'
64017												end of Run
64154												Start Run 17.7 @ 1000'
64200	1080											end of Run
64330												Start Run 17.8 @ 1000'
64553												end of Run
64600	1720	0.11										Start Run 17.9 @ 1000'
64708												end of Run
64840												Start Run 18.0 @ 1000'

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[illegible]



DATE	18 AUG 97	MRF TI	01				NAVIGATOR	Fit Lt 'SIMMO' Simpson		
								VOR 1 DT/TAC 1 LYN		
AIRFIELD		TIME OF FE LYN				COT 1016		VOR 2 - TAC 2		
ATIS		R/W		°C		QNH	1019	ADF LA		
	z	W/V				QFE	102			
		Wx				RPS		Rte Salt 2800		
		Cloud				LFP	6312	MSFL 30		
ATC:	A.	6312				SSR:		INS NAV 09582		
AB	1018	S/H	1020	F/T	8:00					
				ETA	1820					
Time	HDG	DR	G/S	IAS	TAS	W/V	ALT	QNH	LAT/LONG	RUN
103440	069	2P	219	180	213	190 10	FL100	1013	N 5153'0W 00164.5	R1
110550	086	3P	226	-	-	200 14	-	-	5226.2 W 00005.0	ER1
110800	092	3P	220	-	-	190 08	-	-	N 5233'5E 00127.9	P1
111900	065	2P	178	-	190	105 07	280	1022	5241.7 00224.7	EPI
112540	066	φ	-	-	-	090 09	400	-	5250.0 00254.7	R2 P2
112920	-	-	-	-	-	080 10	-	-	5255.0 00310.6	
113024	-	-	-	-	-	095 08	1000	-	5255.7 00315.5	R2.2
113252	-	-	-	-	-	-	-	-	5259.0 00326.5	E
115800	069	φ	199	✓	-	120 03	5000		5310.4 00325.7	P3
121635	061	1P	175	-	-	125 06	400	1022	5337.9 00457.8	R4.1
122005	067	1P	185	-	-	150 09	1000	-	5341.5 00510.1	R4.2
122635	-	-	200	-	-	180 17	3500	-	5350.7 00540.9	R4.3
122855						-	-		5354.0 00582.4	E
122921	073	3P	205	-	-	180 18	4000	-	5354.5 00555.4	R4.4
123220	-	-	-			-	-		5358.3 00610.8	E
123315	07-	-	209	-	-	180 14	5000	-	5359.3 00615.8	R4.5
123850	-	-	198	-	-	170 11	-	-	5406.0 00645.6	E
123943	-	-				-	4000		5406.9 00650.5	R5.1
124235	-	-	192	-	-	-	3500	-	5410.3 00705.8	R5.2
124817	-	-	194	-	-	165 11	1000	-	5416.8 00735.5	R5.3
125335	-	-	185	-	-	180 08	1000	1024	5422.9 00801.8	R6.1
125611	-					-	-		5426.0 00815.1	E
131207	248	2S	197	-	-	195 04	5200	1021	5516.8 00742.3	P6
131917	240	-	196	-	-	065 03	1000	-	5507.2 00706.6	R7.1
132428	245	-	185	-	-	195 07	1000	-	5500.6 00641.6	R7.2
132953	249	-	-	-	-	205 08	3500	-	5454.4 00613.5	R7.3
133200	-	-	193	-	-	210 07	4000	-	5452.1 00602.4	E ✓
133448	-					220 08	-		5448.8 00548.2	ER7.4
133550	-	-	187	-	-	220 10	6200		5447.6 00543.0	R7.5
134010	-	-	-			-	-	-	5442.1 00520.5	E
134422	-	-	-	-	-	-	4000		5440.6 00514.6	R8.1
134258	-	-	-	-	-	210.10	-		5438.8 00507.0	E
134325						205 11			5437.8 00502.2	8.2
ATIS		R/W		°C		QNH		LND		
	z	W/V				QFE		AB		
		Wx						Time		
		Cloud							CFWD	

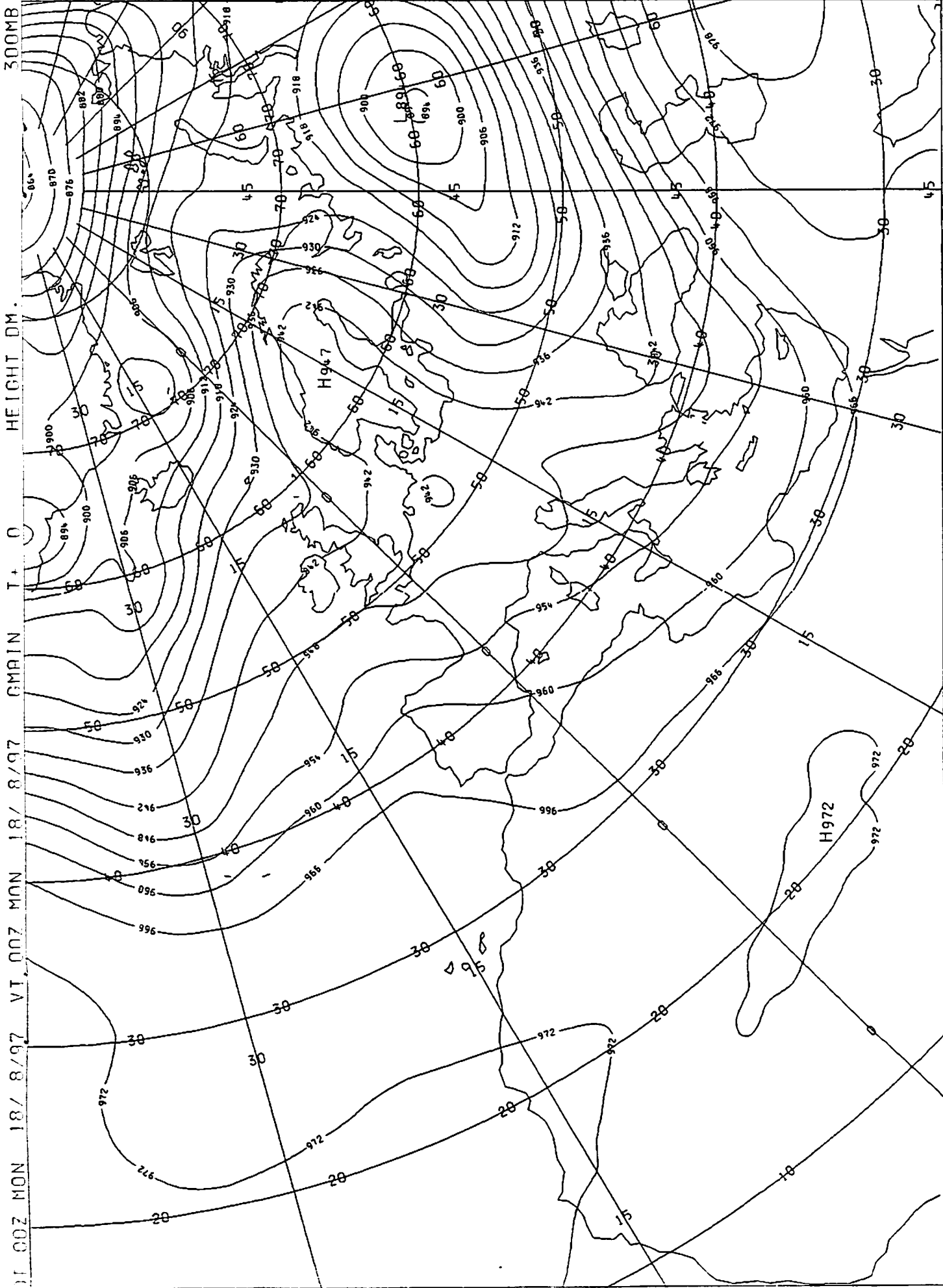
4000  
5000

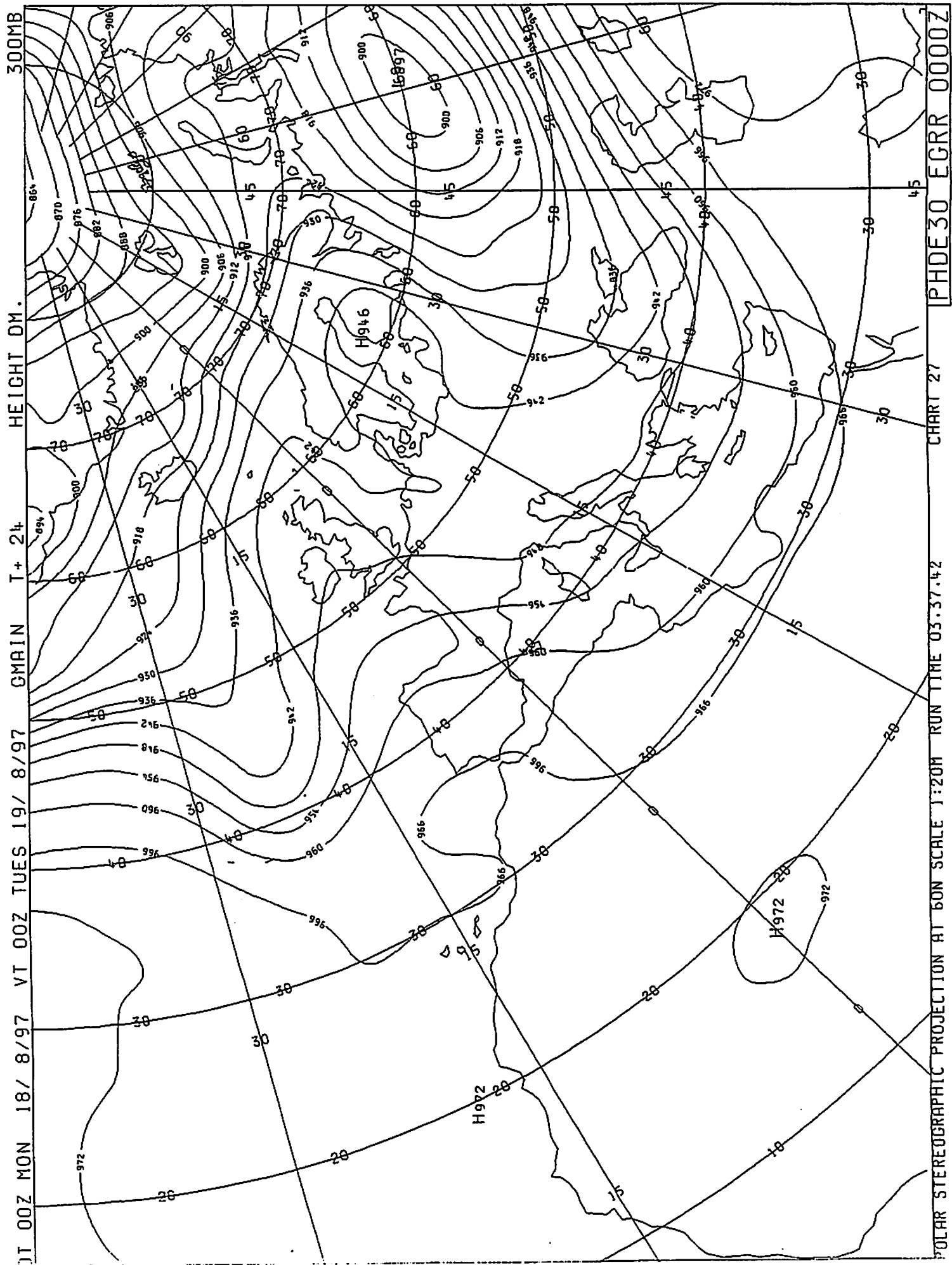
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1000

B/FWD	TIME Z	HDG	DR	G/S	IAS	TAS	W/V	ALT	QNH	LAT/LONG	RUN
	134518	246	45	187	180	190	200 10	3000	1021	N 5436.1 E 00455.0	E8.2
	134833	-	0	196	-	-	030 07	1000	-	5432.1 00439.1	R83
	134940						015 07			5430.5 00433.2	E-
	135205	-	-	190	-	-	020 07	100	-	5427.4 00420.9	R9.1
	135306	-	-	-	-	-	-	-	-	5425.9 00416.0	E
	135442	-	-	196	-	-	045 04	1000	-	5423.2 00408.4	R9.2
	135618	240	-	190	-	-	-	-	-	5420.3 00408.0	E-
	135920	230	0	-	-	-	015 02	3500	-	5414.1 00347.7	R9.3
	140005	-	-	-	-	-	CalM	-	-	5410.7 00341.1	E
	140121	-	-	-	-	-	-	4000	-	5409.6 00339.7	R9.4
	141058	-	-	-	-	-	080 05	-	-	5351.6 00264.9	E-
	141215	250	-	200	-	-	065 06	5300	1021	5350.4 00248.3	9.5
	141655	250	-	-	-	-	080 06	-	-	5345.3 00222.6	E-
	144311	069	-	199	-	-	150 6	-	-	5428.8 00133.2	R10.1
	144445	-	-	-	-	-	-	-	-	5431.0 00142.0	102
	144613	-	-	195	-	-	140 E	-	-	54327 001488	E✓
	144755	074	-	185	-	-	110 07	2500	-	5435.0 00157.5	R10.3
	144906	-	-	-	-	-	-	-	-	5436.5 00203.4	E
	145152	-	-	-	-	-	120 06	1000	-	5439.8 00217.1	R10.4
	145307	-	-	-	-	-	140 05	-	-	5444.2 00223.1	E
	145522	0600	-	173	-	-	100 05	100	-	5444.4 00233.9	R11.1
	145629	-	-	-	-	-	-	-	-	5445.9 00238.5	E
	145815	-	-	-	-	-	-	1000	-	5449.7 00248.8	R11.2
	150012	-	-	-	-	-	-	-	-	5452.3 00254.1	E
	150200	-	-	182	-	-	110 04	2500	-	5455.3 00302.0	R11.3
	150600	-	-	190	-	-	120 02	4000	-	5503.2 00319.0	E
	150732	-	-	197	-	-	210 03	-	-	5505.9 00326.1	11.4
	150900	-	-	-	-	-	190 04	-	-	5507.9 00333.7	E-
	151025	-	-	203	-	-	230 03	5300	-	5509.7 00341.0	11.5
	151222	-	-	-	-	-	-	-	-	5512.2 00351.8	E
	151352	-	-	200	-	-	195 04	4000	-	5514.0 00359.7	R12.1
	151832	-	-	193	-	-	CalM	2500	-	5520.4 00422.6	12.2
	151952	-	-	-	-	-	-	-	-	5522.1 00430.1	E
	152207	-	-	184	-	-	-	1000	-	5524.8 00442.2	R123
	152745							100	1021	6531.0 00510.0	R13.1
	153151	070	-	176	-	-	060 05	1000	-	5534.9 00528.8	E-
	153340	-	-	180	-	-	CalM	-	-	5536.8 00538.1	R13.2
	153654	067	-	-	-	-	140 06	2500	-	5540.5 00553.9	R13.3
	153753	-	-	-	-	-	-	-	-	5541.8 00559.0	E-
	153924	070	-	200	-	-	215 06	4000	-	5543.5 00606.9	R13.4
	154042	-	-	-	-	-	195 06	-	-	5545.2 00613.9	E
	154159	-	-	-	-	-	185 10	5300	-	5546.9 00620.8	R13.5
	154353						-	-	-	5549.9 00633.6	E
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z	W/V					QFE		A/B			
Wx								Time			
Cloud											

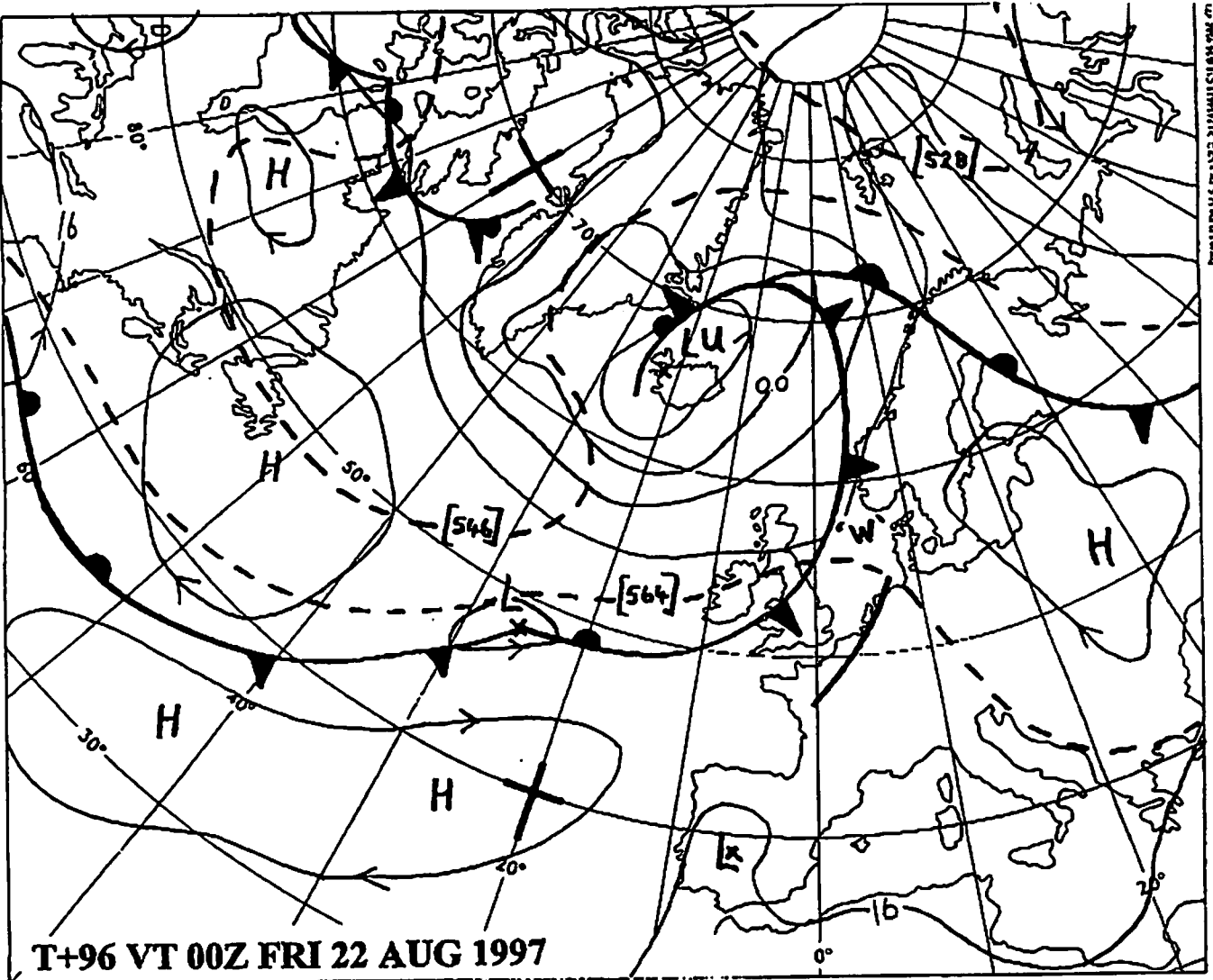
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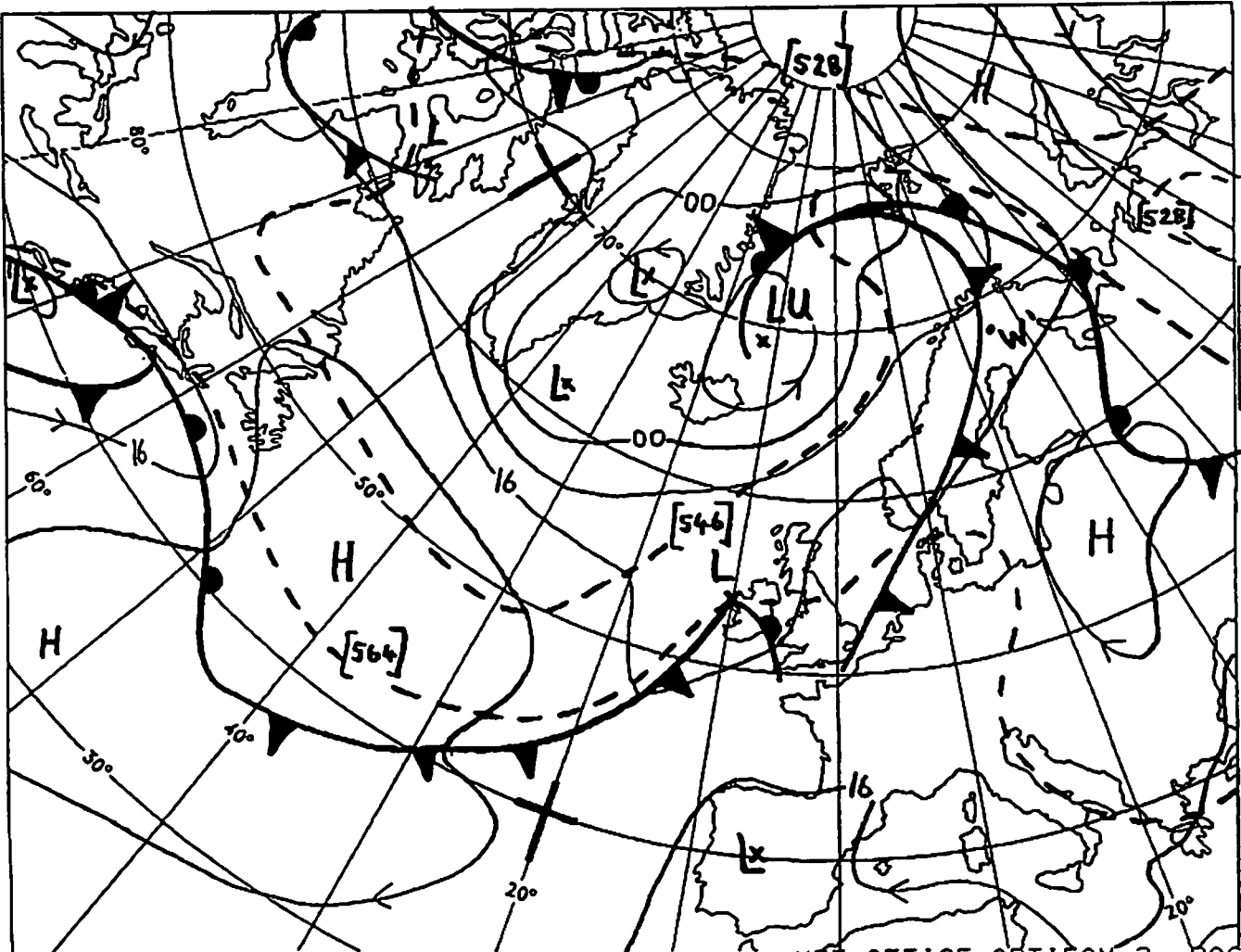




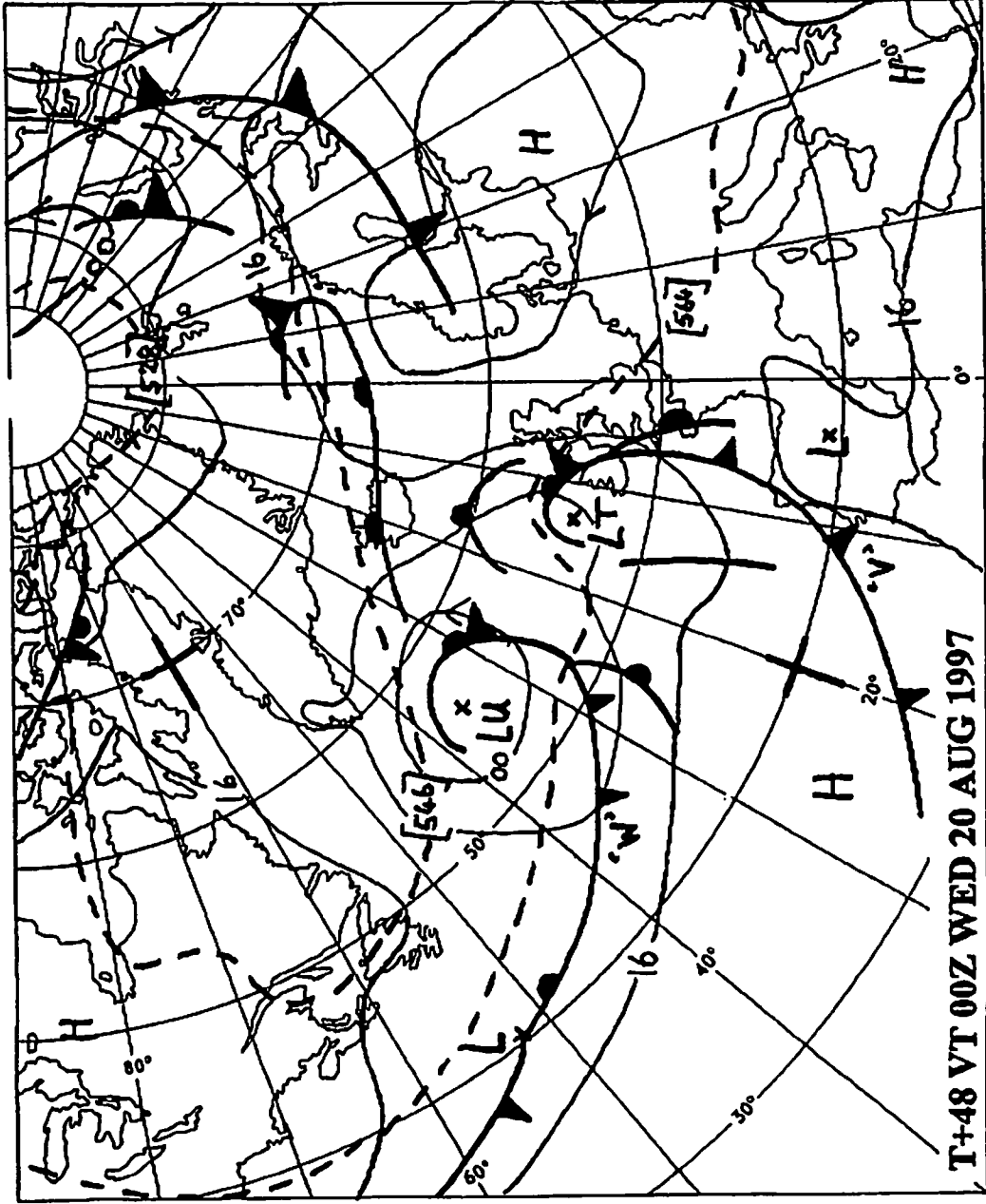
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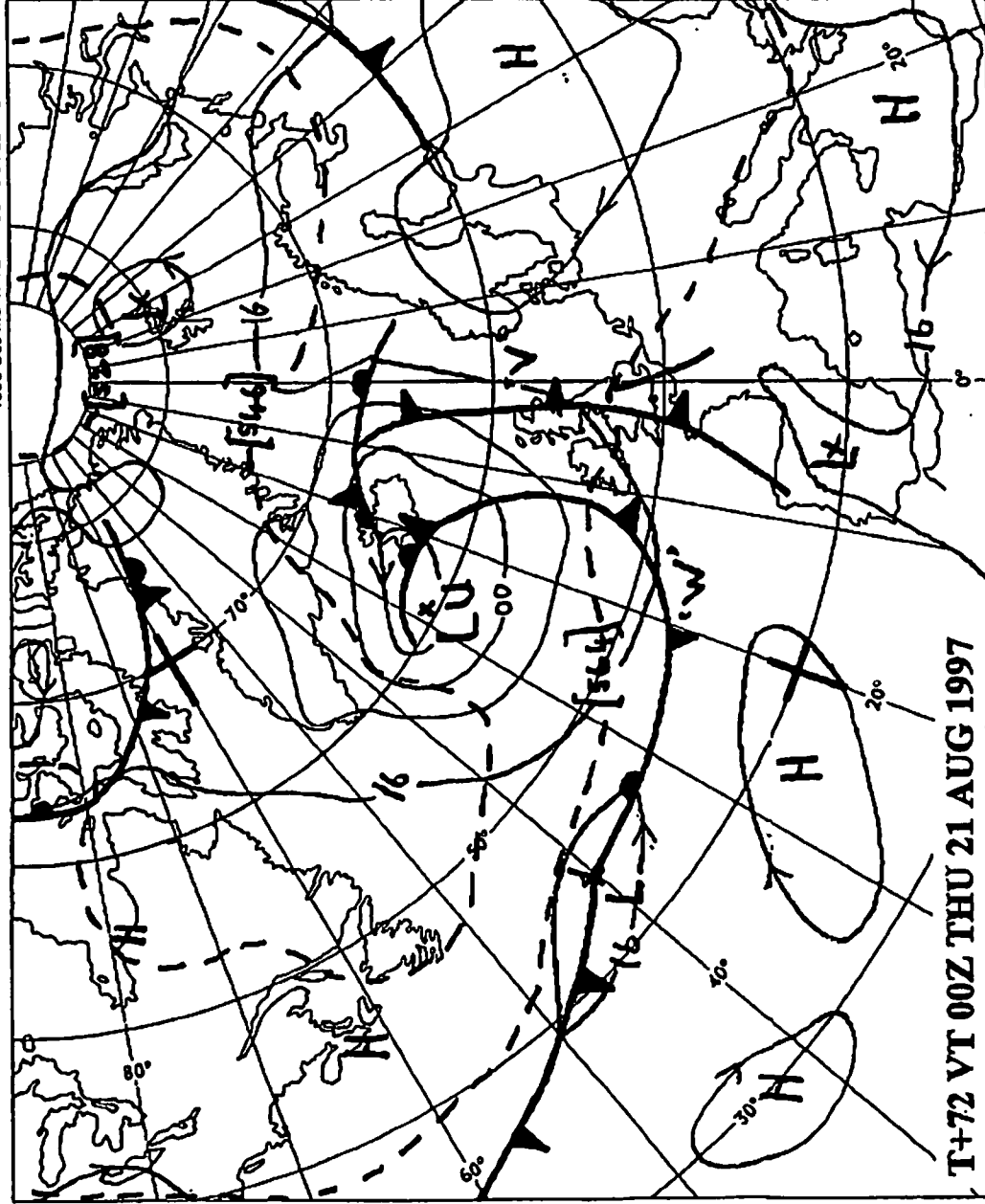
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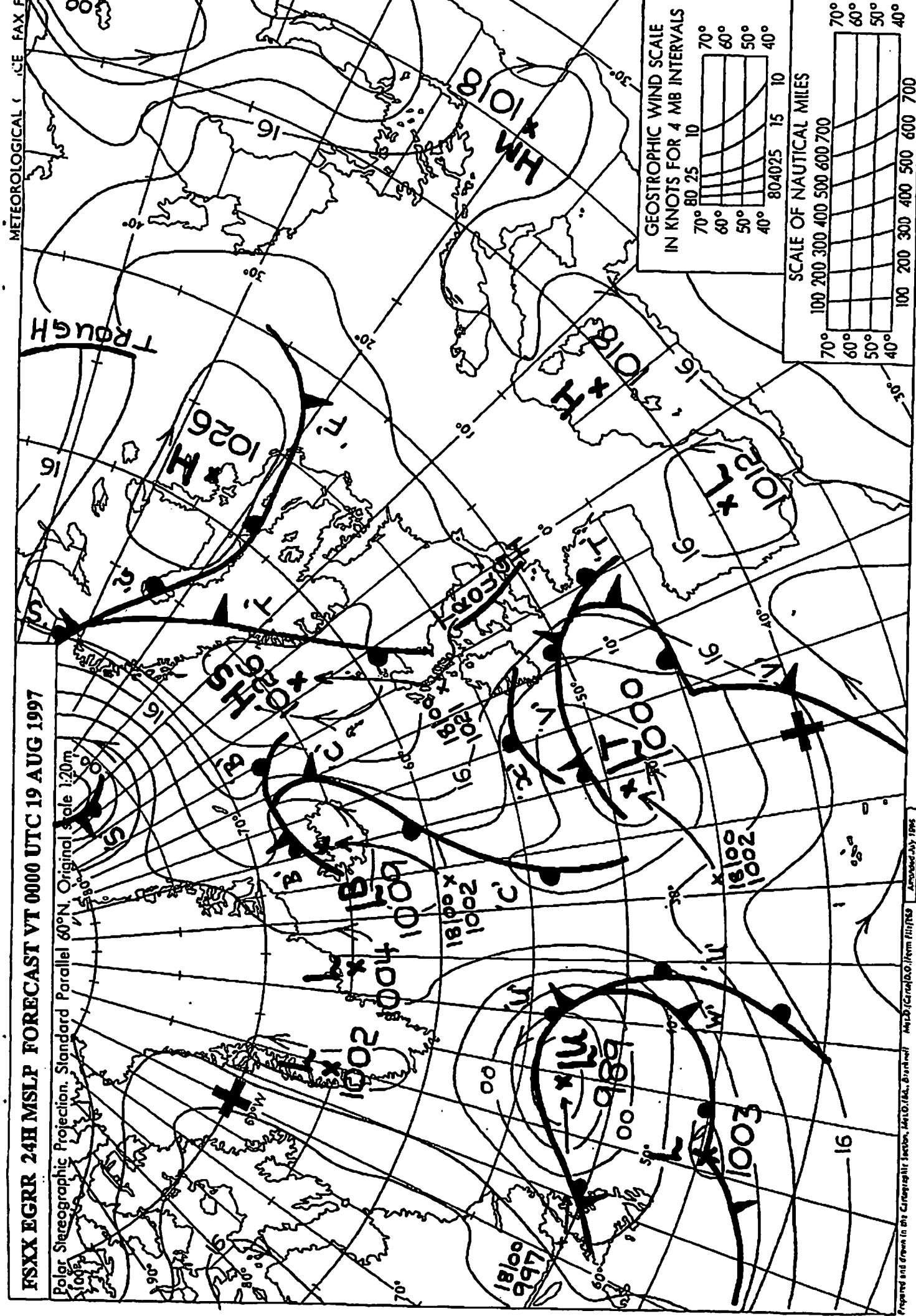
FS/FUXX EGRR



POL. STER. PROJ. STAND. PARALLEL 60°N 0 500 1000 NM SEA LEVEL ISOPLETHS 1000-500 mb THICKNESS ISOPLETHS



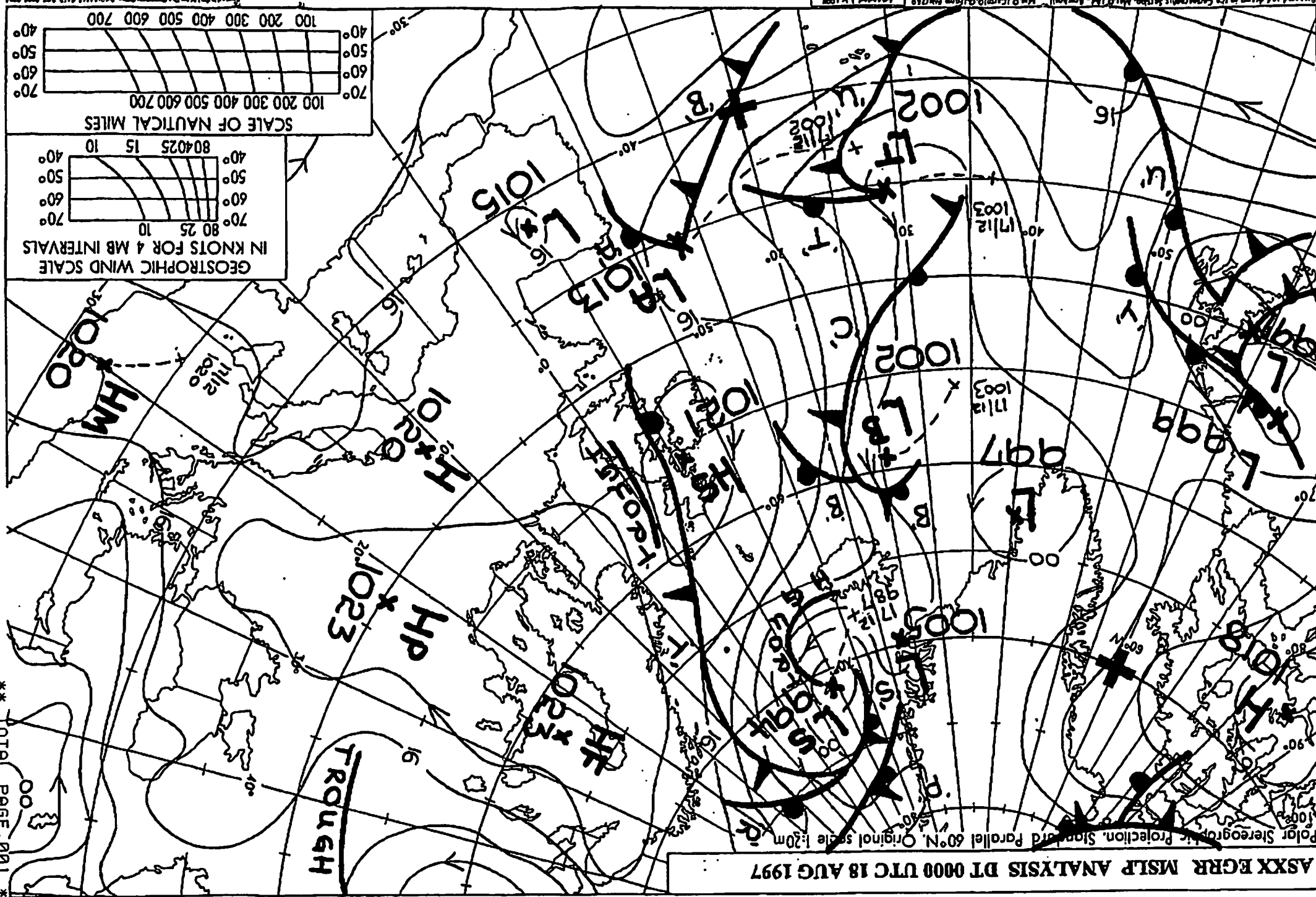




18 AUG '97 04:11 FROM MET 110PS BRCKNELL

ASXX EGRB MSLP ANALYSIS DT 0000 UTC 18 AUG 1997

Polar Stereographic Projection, Standard Parallel 60°N, Original scale 1:20m



METEOROLOGICAL OFFICE FAX F 28

\*\* TOTAL PAGE.001 \*\*

MET-OFFICE-ARTIFAX-4 PAGE.001

18 AUG '97 03:42

18 AUG '97 04:02

500-1000MB  
500MB

THICKNESS DM.  
HEIGHT DM.

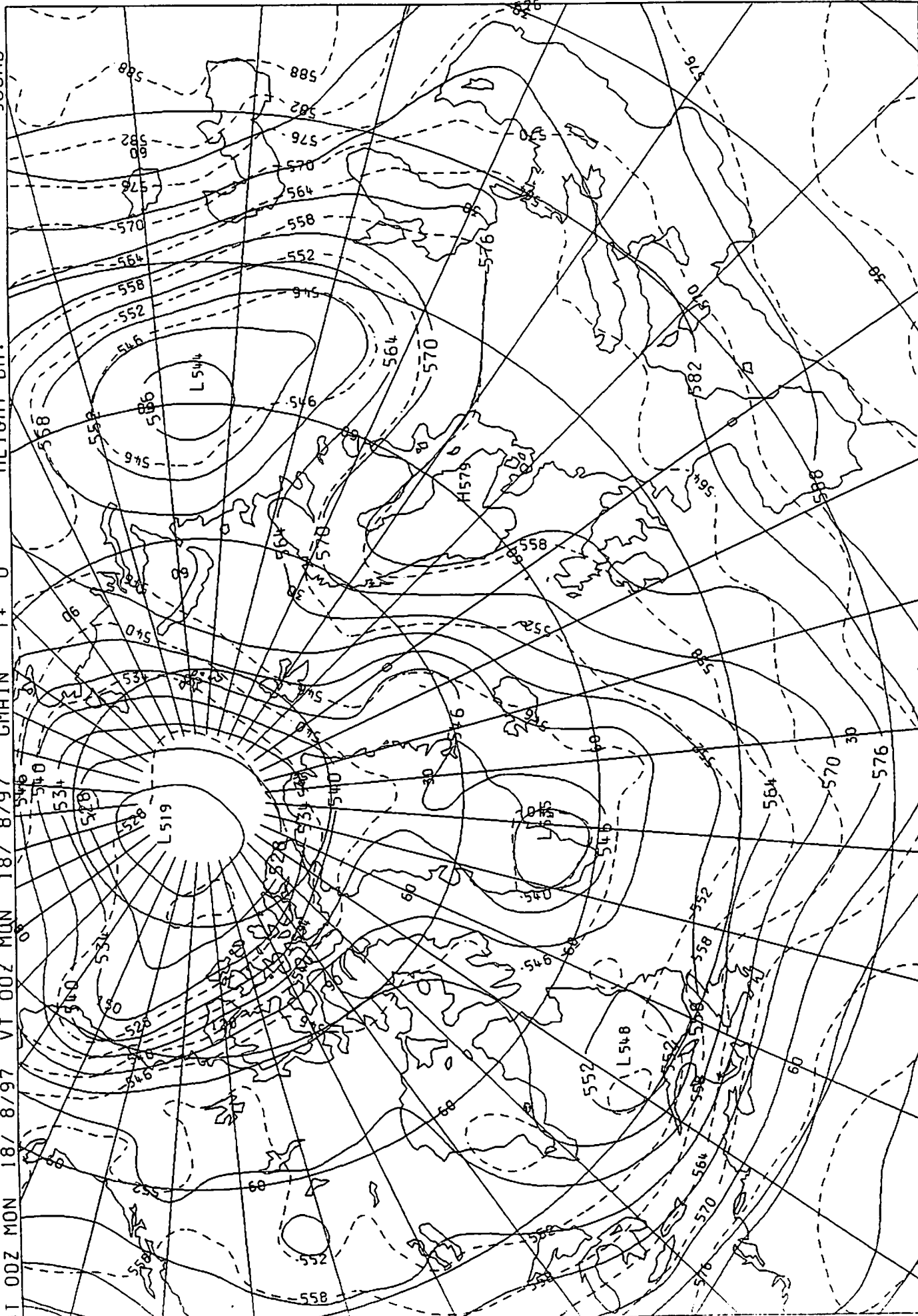
GMRAIN I+ 0

18/ 8/97

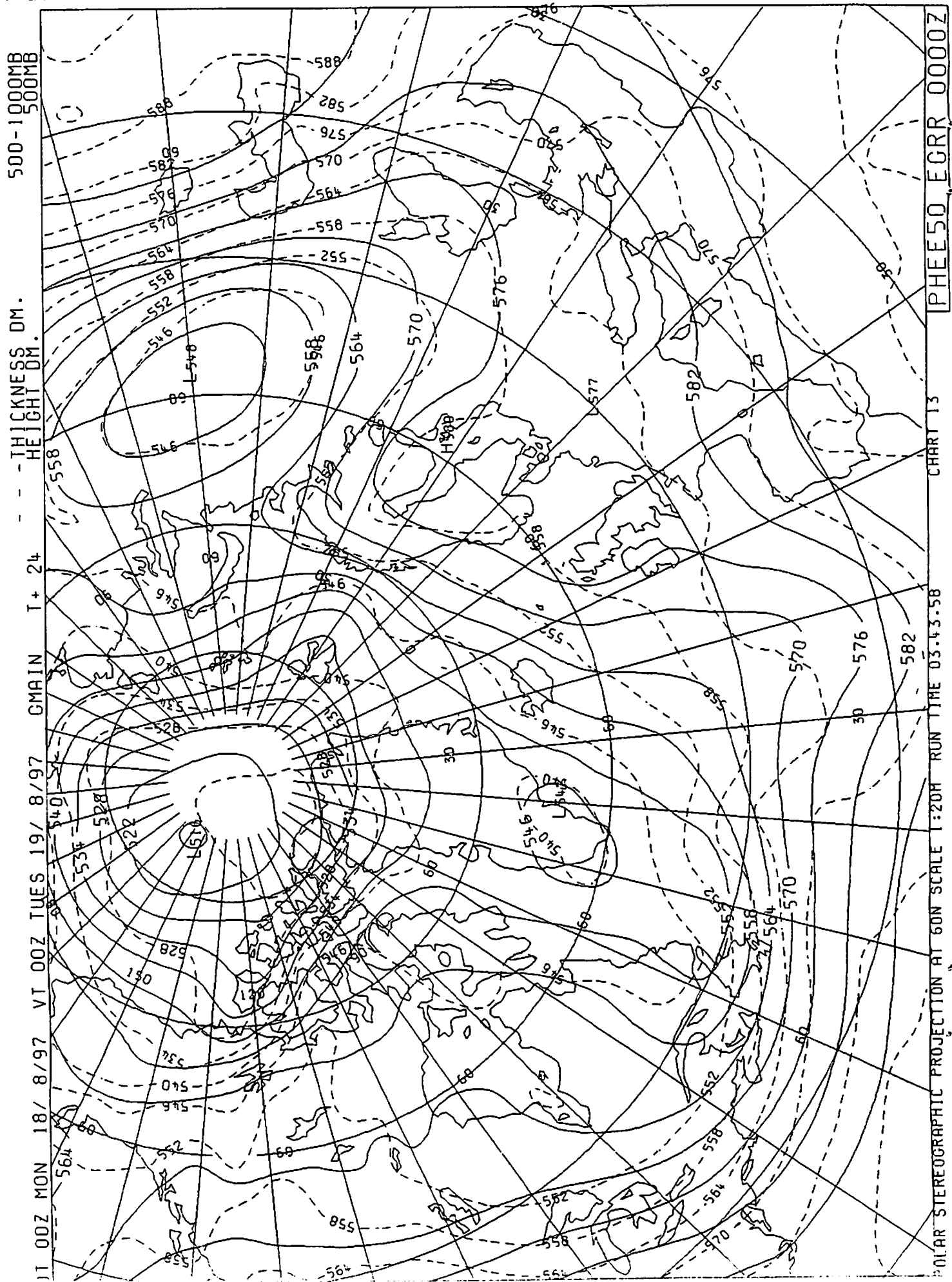
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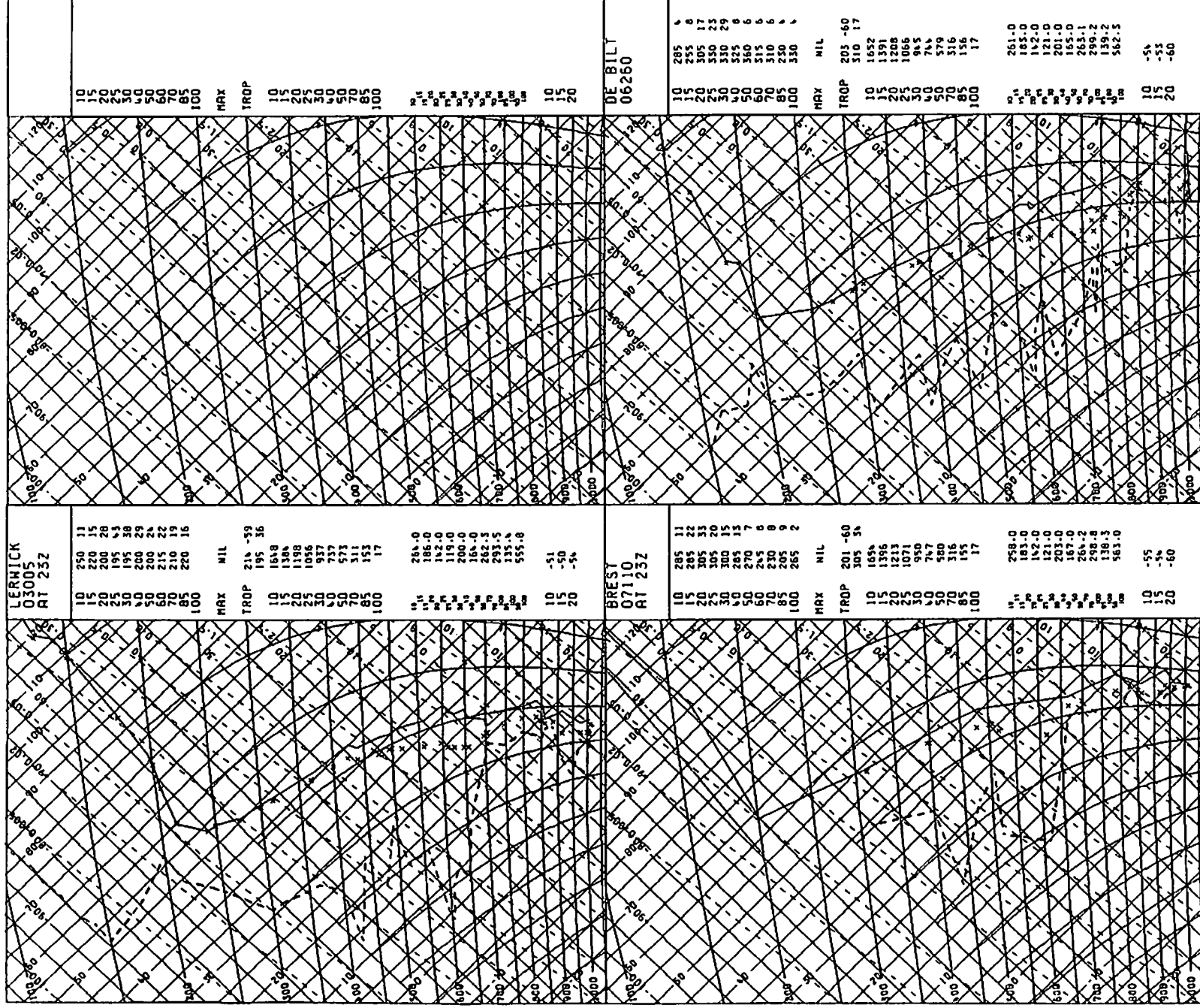
18/ 8/97

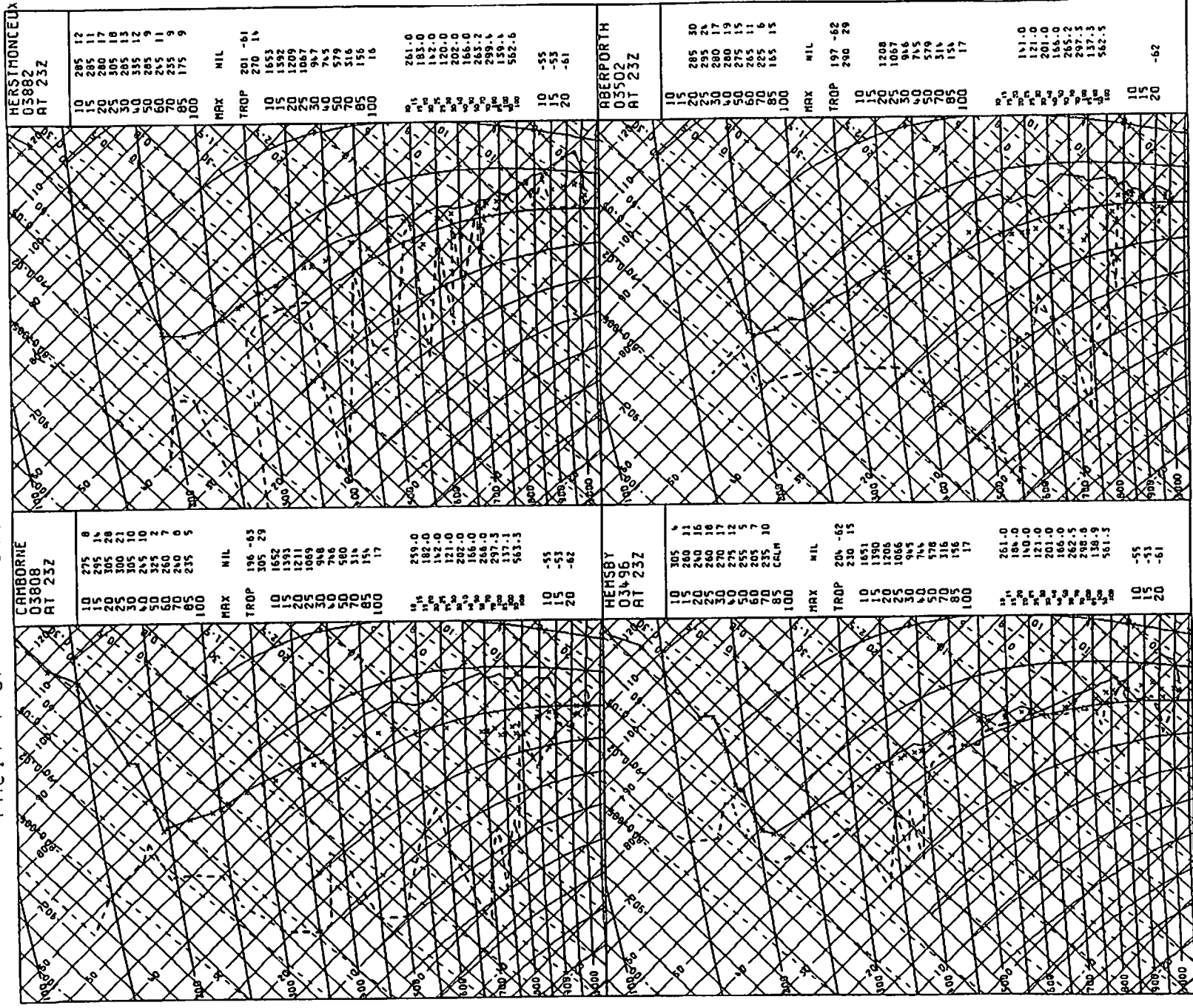
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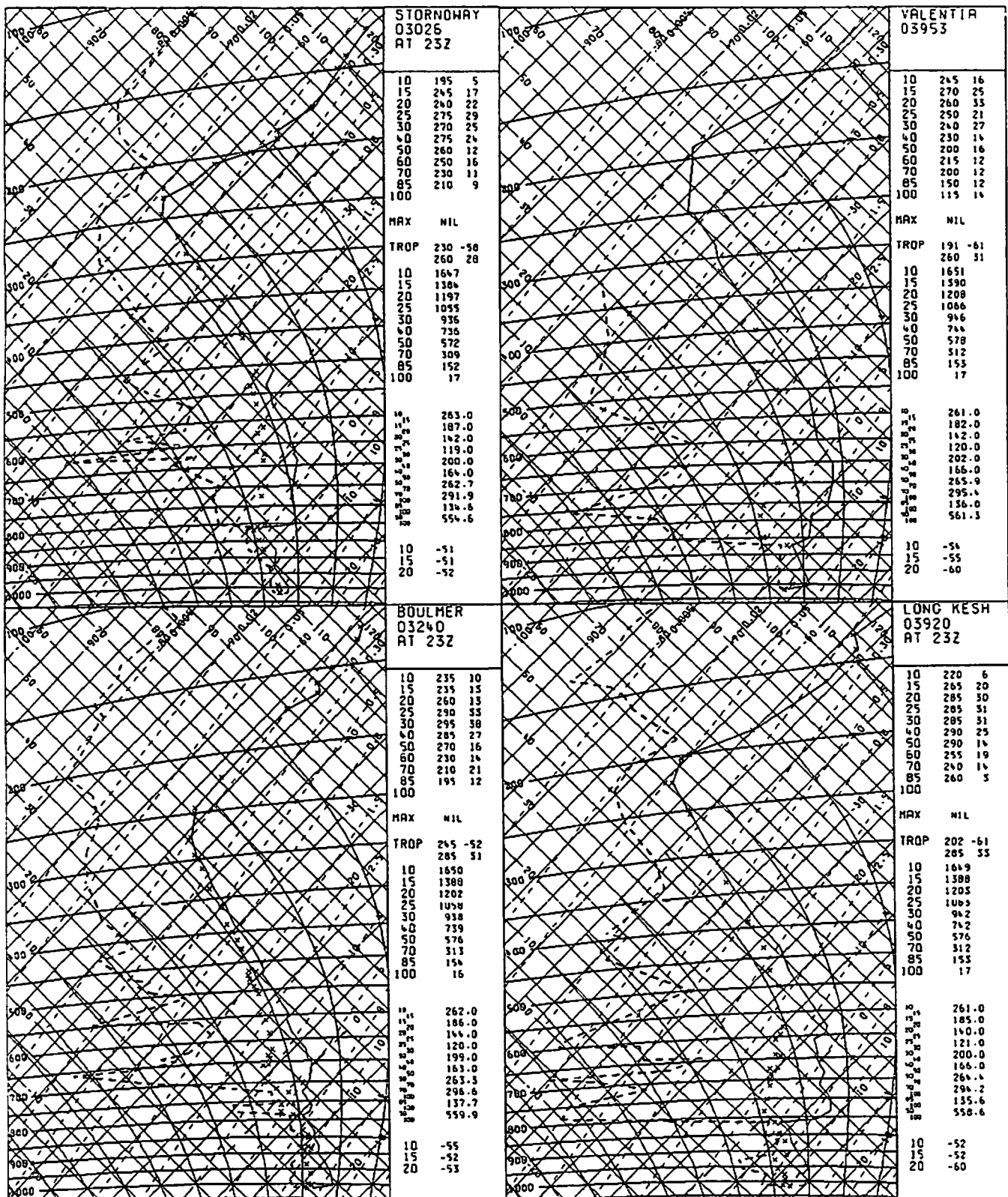
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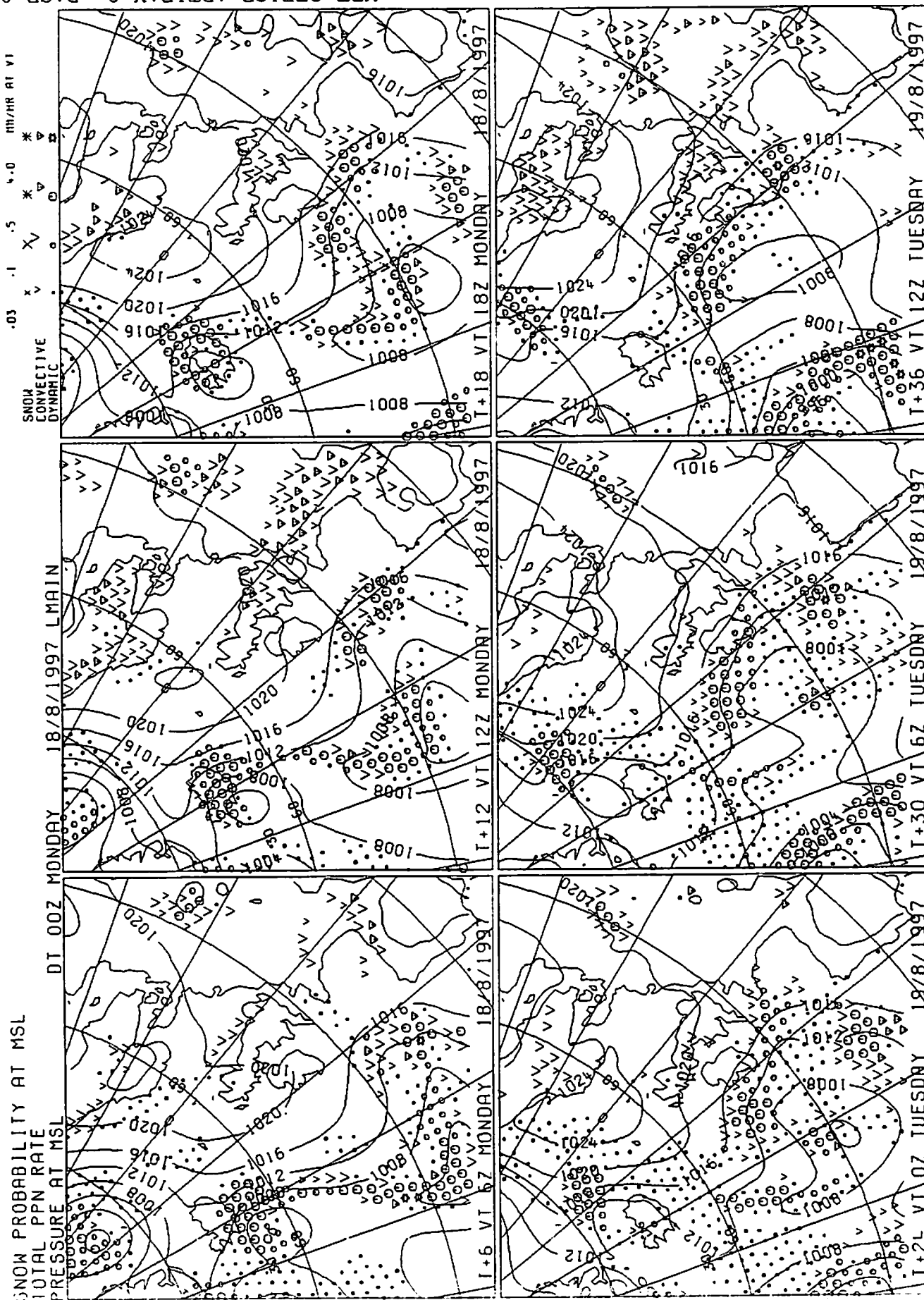


FACIT 4-UP

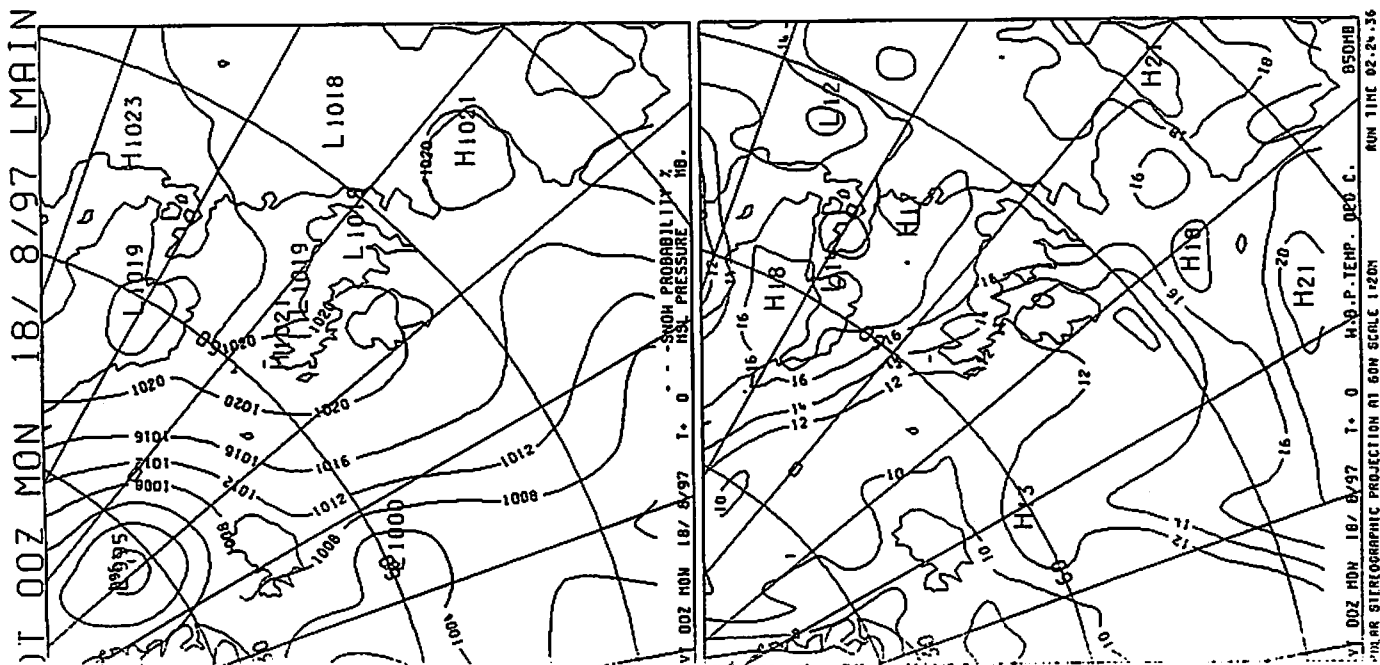
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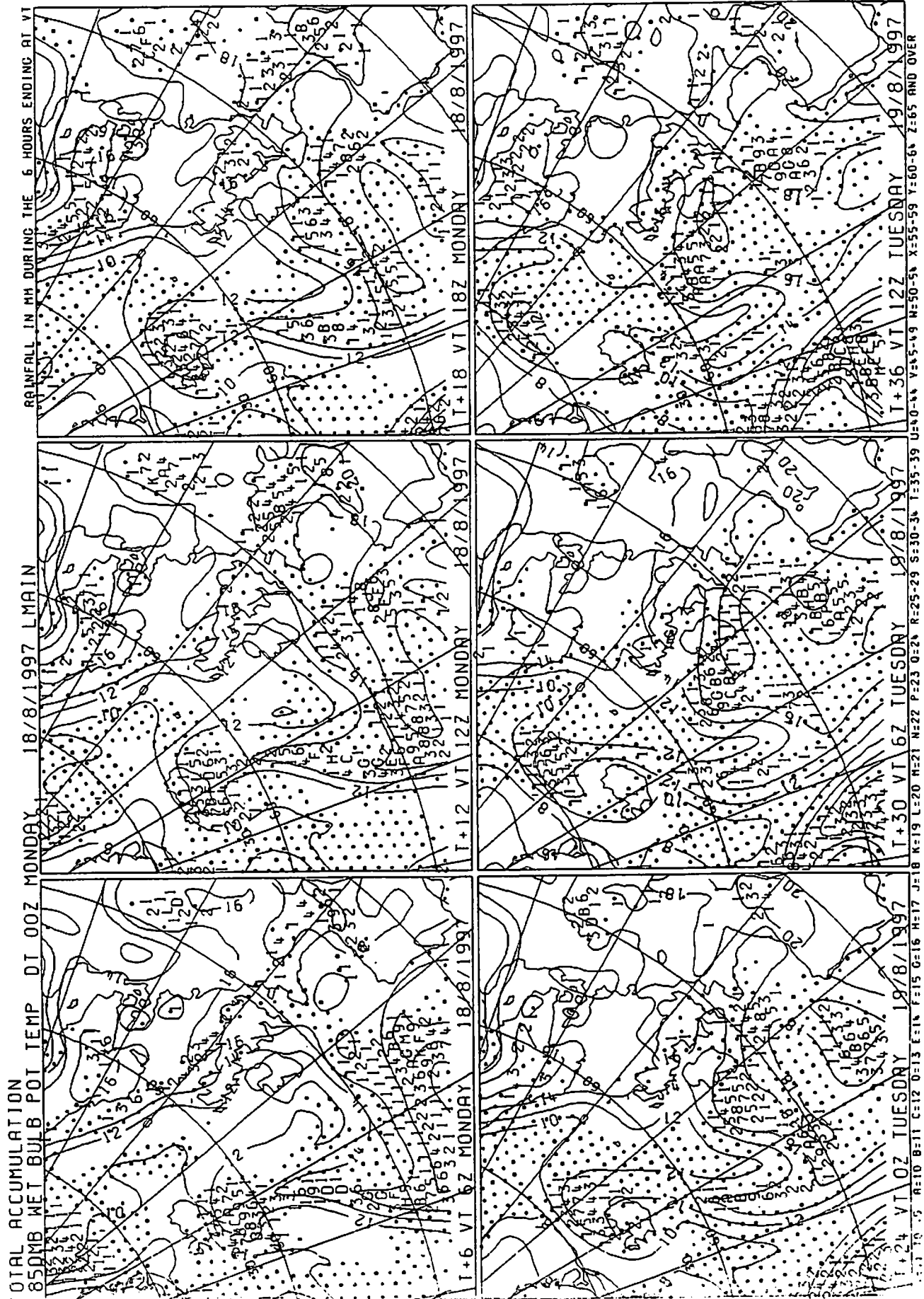
18 AUG '97 03:34

MET\_OFFICE\_ARTIFAX\_5 PAGE.001









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Extraction on 18-AUG-97 20:59:24

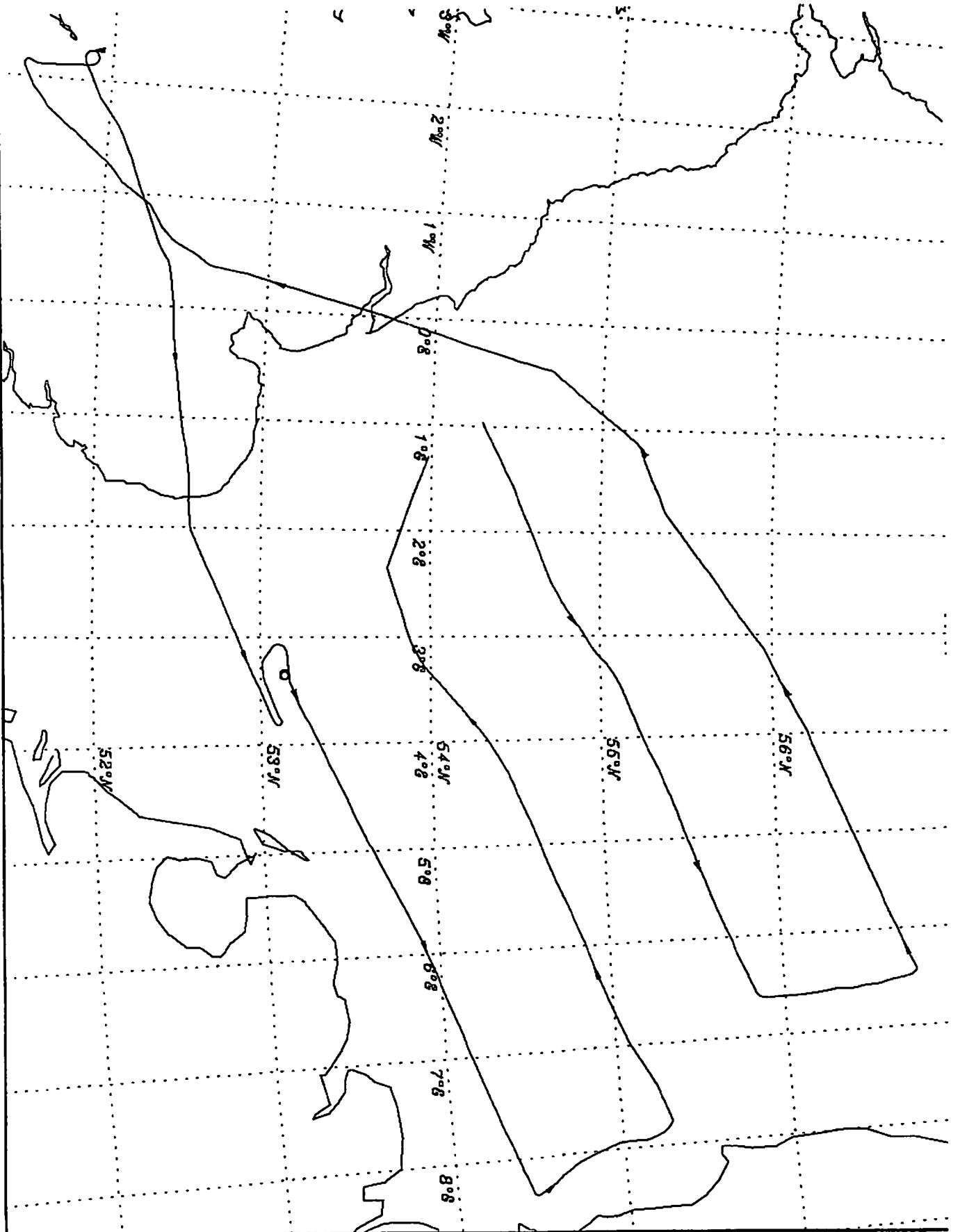
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ISS 31 DBF 31 IC 02 121 parameters recorded 889 samples per second

7 sections of data

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3	08:41:55	031315	008	03223	03208	14:32:24	052344	090	24252	24237
4	14:36:06	052566	090	24474	24238	15:01:48	054108	105	26016	25780
5	15:01:51	054111	105	26019	25781	15:14:12	054852	112	26760	26522
6	15:14:15	054855	112	26763	26523	15:25:11	055511	117	27419	27179
7	15:25:14	055514	118	27422	27180	18:09:01	065341	173	37249	37007

GPS data  
07:50:44 - 18:12:36



# FLIGHT LEADER'S INSTRUMENT STATUS REPORT

FLIGHT NO: *A571*

DATE: *18/8/97*

MRF *1* *JACIA*

INSTRUMENT	FITTED	OPERATED	COMMENTS
NAVIGATION:			
GPS	✓	✓	
OMEGA	✓	✓	
INU	✓	✓	
RADALT	✓	✓	
THERMOMETERS:			
DI TEMP	✓	✓	
NDI TEMP	✓	✓	
ICTP	✓	✓	
HEIMANN	✓	✓	
HYGROMETERS:			
GEN. EASTERN	✓	✓	
TWC	✓	✓	
FWVS	✓	✓	
J/W	✓	✓	
EXP. PITOT HEAD:			
STATIC PRESS.	✓	✓	
PITOT PRESS.	✓	✓	
GUST VANES	✓	✓	
RADIOMETERS:			
UPPER CLEAR	✓	✓	
UPPER RED	✓	✓	
UPPER SILICON	✓	✓	<i>JNO<sub>2</sub></i>
LOWER CLEAR	✓	✓	
LOWER RED	✓	✓	
LOWER SILICON	✓	✓	<i>JNO<sub>2</sub></i>
MARSS	X		
SAFIRE	X		
DEIMOS	X		
ARIES	X		
CHEMISTRY:			
OZONE	✓	✓	
ECGC	✓	✓	
NOX	✓	✓	
OTHERS:			
CCN	✓	X	
CLOUD PHYSICS	✓	✓	
CABIN PRESS	✓	✓	
NEPHELOMETER	X		
PSAP	✓	✓	

P.T.O. FAULTS/INCIDENTS

- ① TORQUE ON A055 = 4.0
- ② SLIGHT ECCENTRIC ON A0A SHAFT
- ③ A/C SCIENTISTS DISPLAY LOSING VERTICAL ITWD
- ④ FL DISPLAY BUNDLED AT UNABLE TO RECOVER
- ⑤ TWE NEEDS NEW CONSTANTS
- ⑥ DRS TIME REPEATER IN REAR VAN U/S
- ⑦ ROTARY SWITCH ON FL CANNES NOT VENT LOOSE

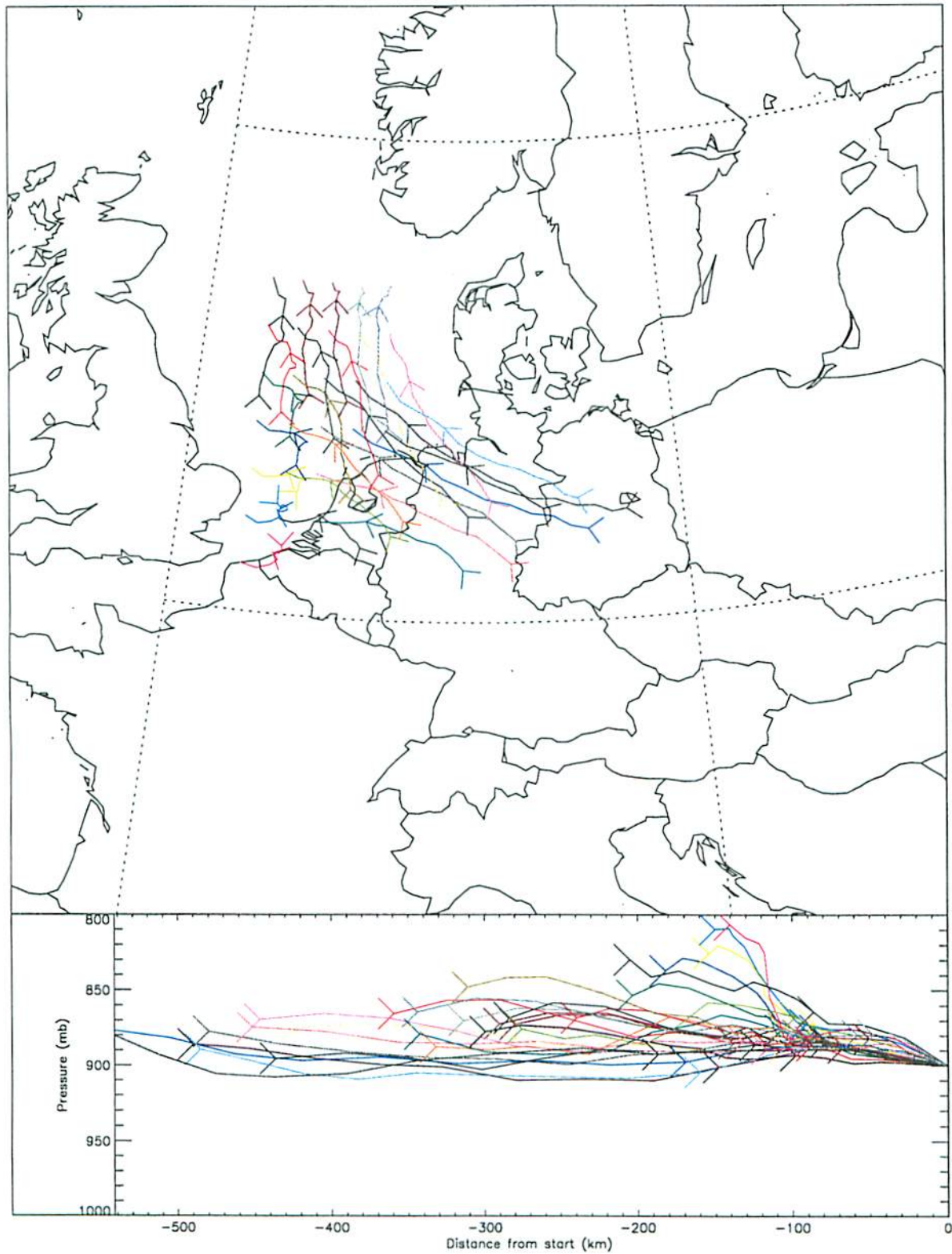
## LIST OF FORMS USED ON FLIGHT

No. of forms	Form Title
✓	Aircraft Scientist de-briefing sheet
✓	Aircraft Scientist log
✓	Aircraft Scientist post flight requirements sheet
✓	Interactive log
✓	Flight Leader pre-flight check form
✓	Flight Leader in-flight check form
✓	Flight Leader in-flight log
✓	Flight Leader Video tape log (photocopy original)
	<del>SAFIRE log</del>
	<del>CCN log</del>
	<del>MARSS log</del>
	<del>DEEMOS log</del>
✓	Chemistry log <i>PAN GC, bottles, PERCH ETC. NOT GIVEN TO FLIGHT LEADER</i>
	<del>Particulate / Filter boom Operator's log</del>
✓	2DC / FSSP / Holography Operator's log
	<del>Sonde Ejector's log</del>
✓	Navigator's log
	<del>Photographic log (photocopy original)</del>
✓	Instrument status forms
	RTD prints — <i>NOT GIVEN TO FLIGHT LEADER</i>
✓	Raw data plots
✓	Weather charts
✓	Satellite pictures
✓	GPS track

# TRAJ\_A970818.TXT

From 0Z 17/ 8/1997 to 12Z 18/ 8/1997

Arrows every 24 hrs

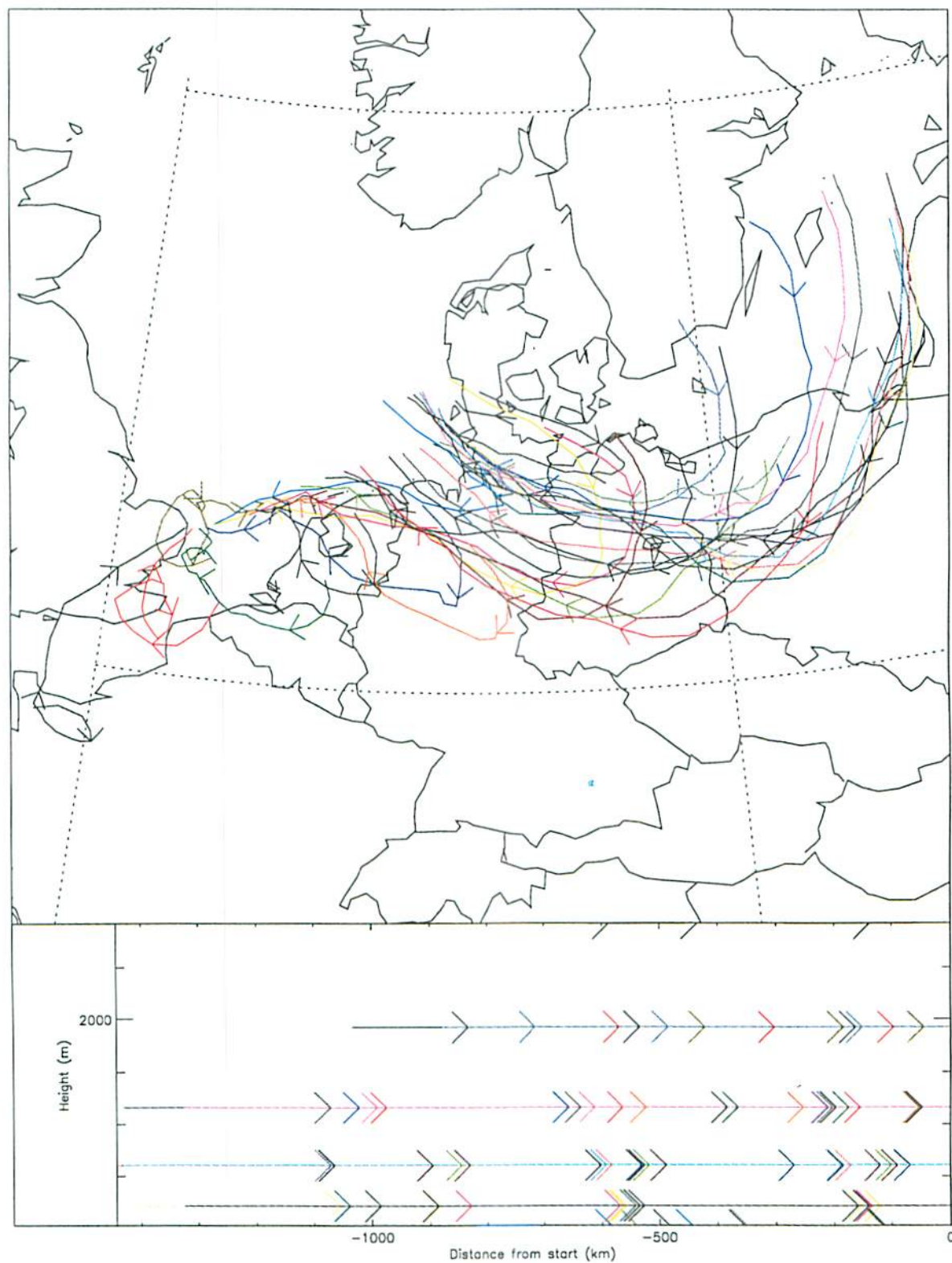




# TACIA\_970818 (2D Model levels)

From 12Z 15/ 8/1997 to 12Z 18/ 8/1997

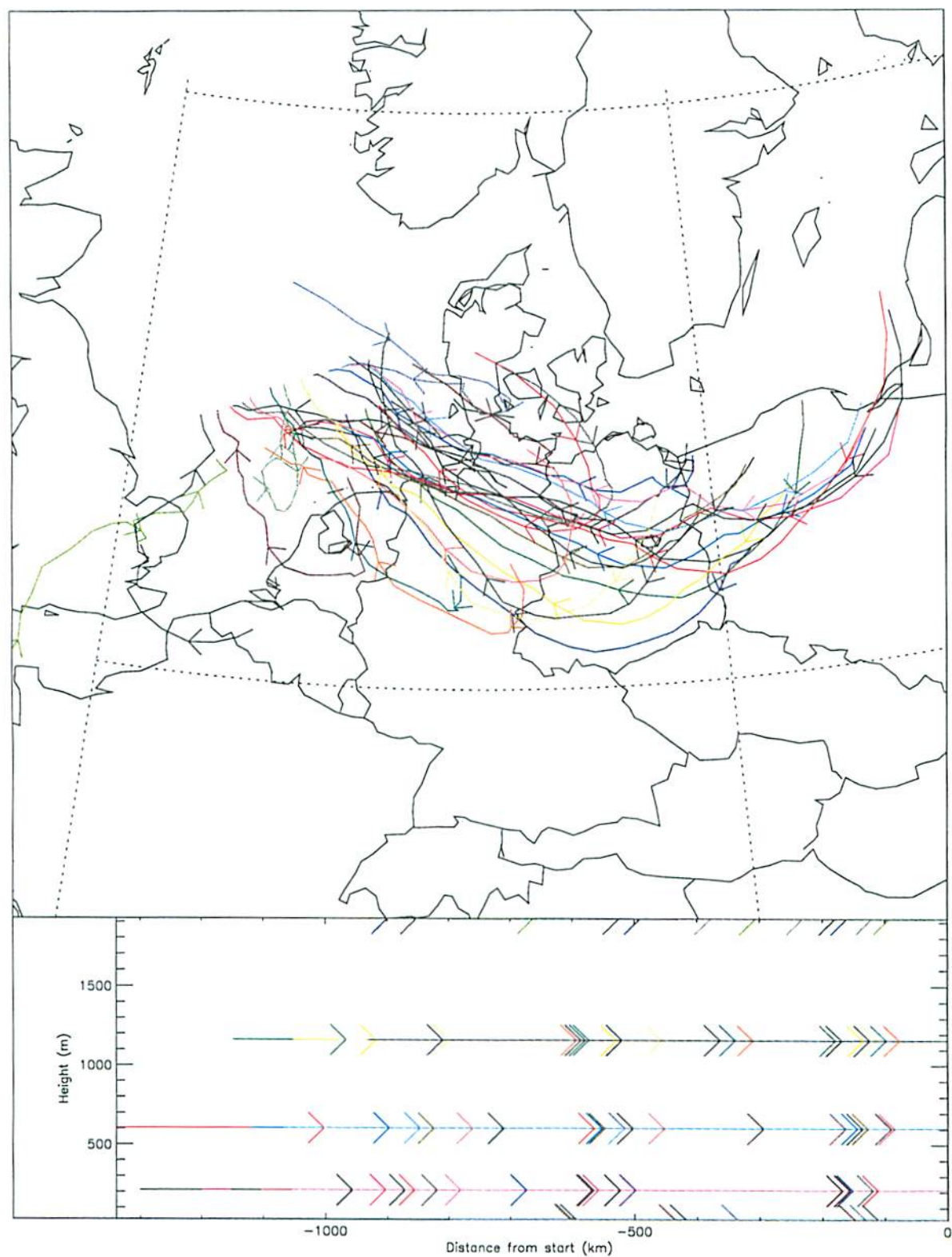
Arrows every 24 hrs



# TACIA\_970818 (2D Model levels)

From 12Z 15/ 8/1997 to 15Z 18/ 8/1997

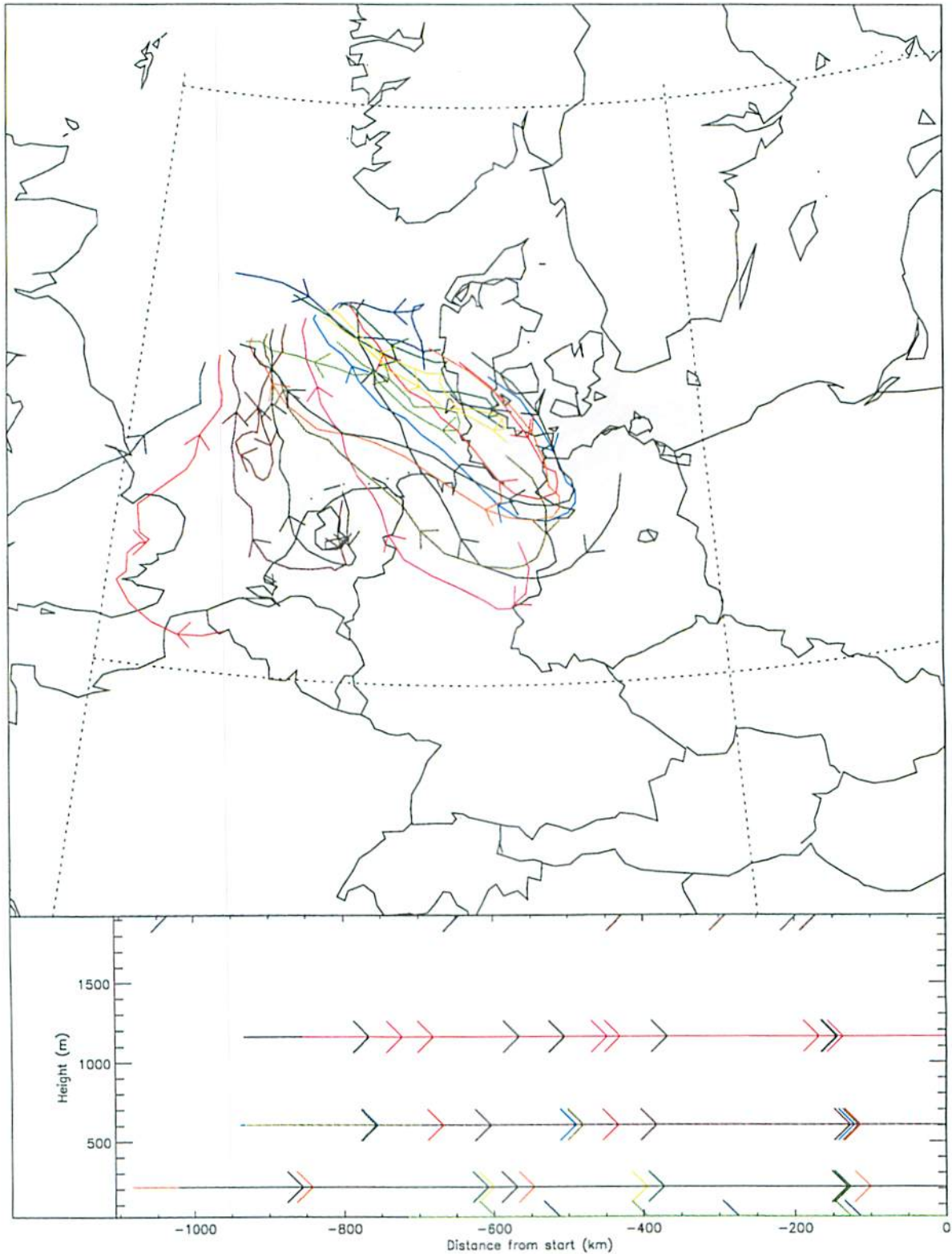
Arrows every 24 hrs



# TACIA\_970818 (2D Model levels)

From 15Z 15/ 8/1997 to 18Z 18/ 8/1997

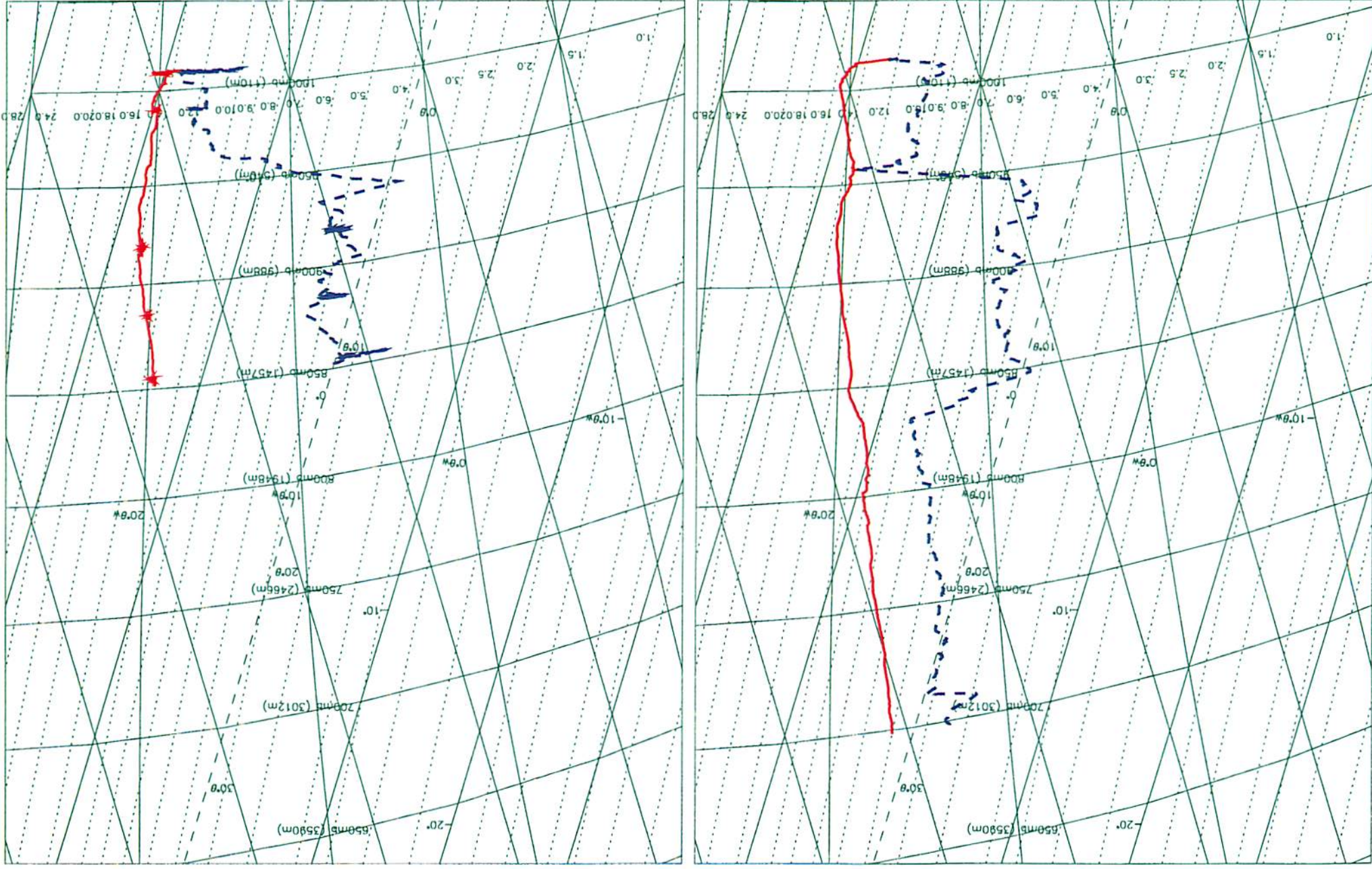
Arrows every 24 hrs





A571 18-AUG-97

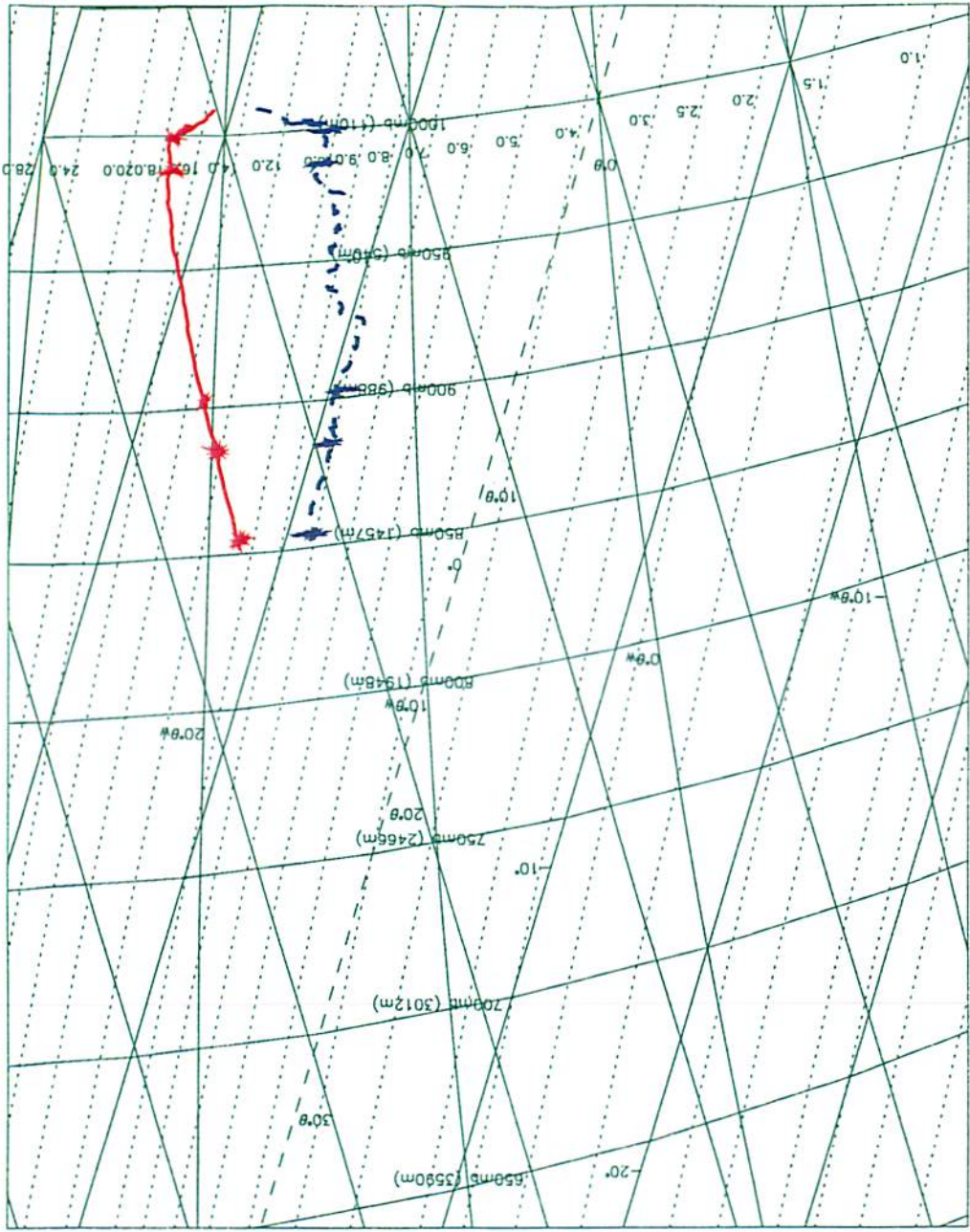
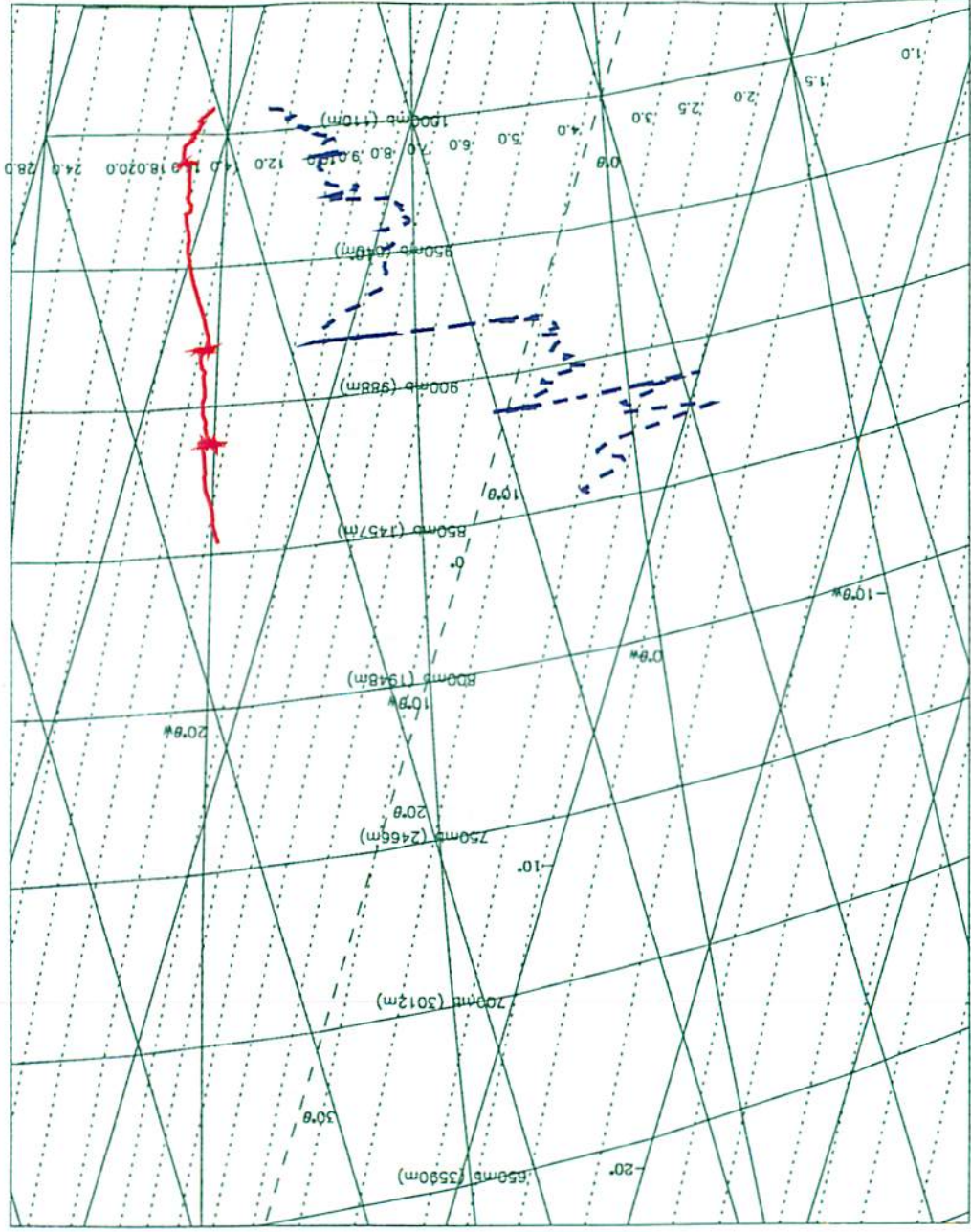
P1 (110801-111859) + P2 350'-5000'(112540-115344)





A571 18-AUG-97

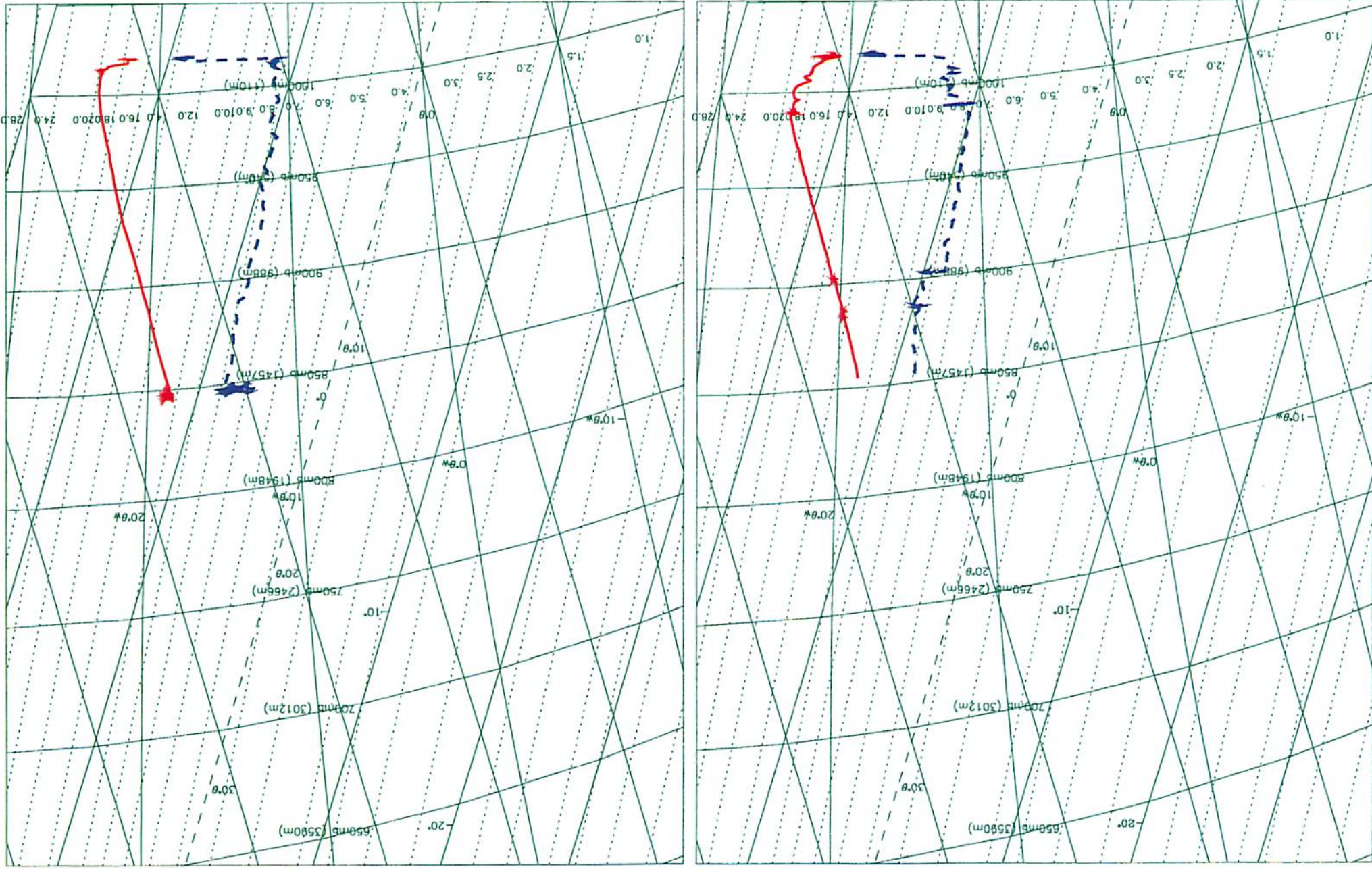
P3 5000'-400'(115759-121633) + P4 400'-5000'(121633-123850)





A571 18-AUG-97

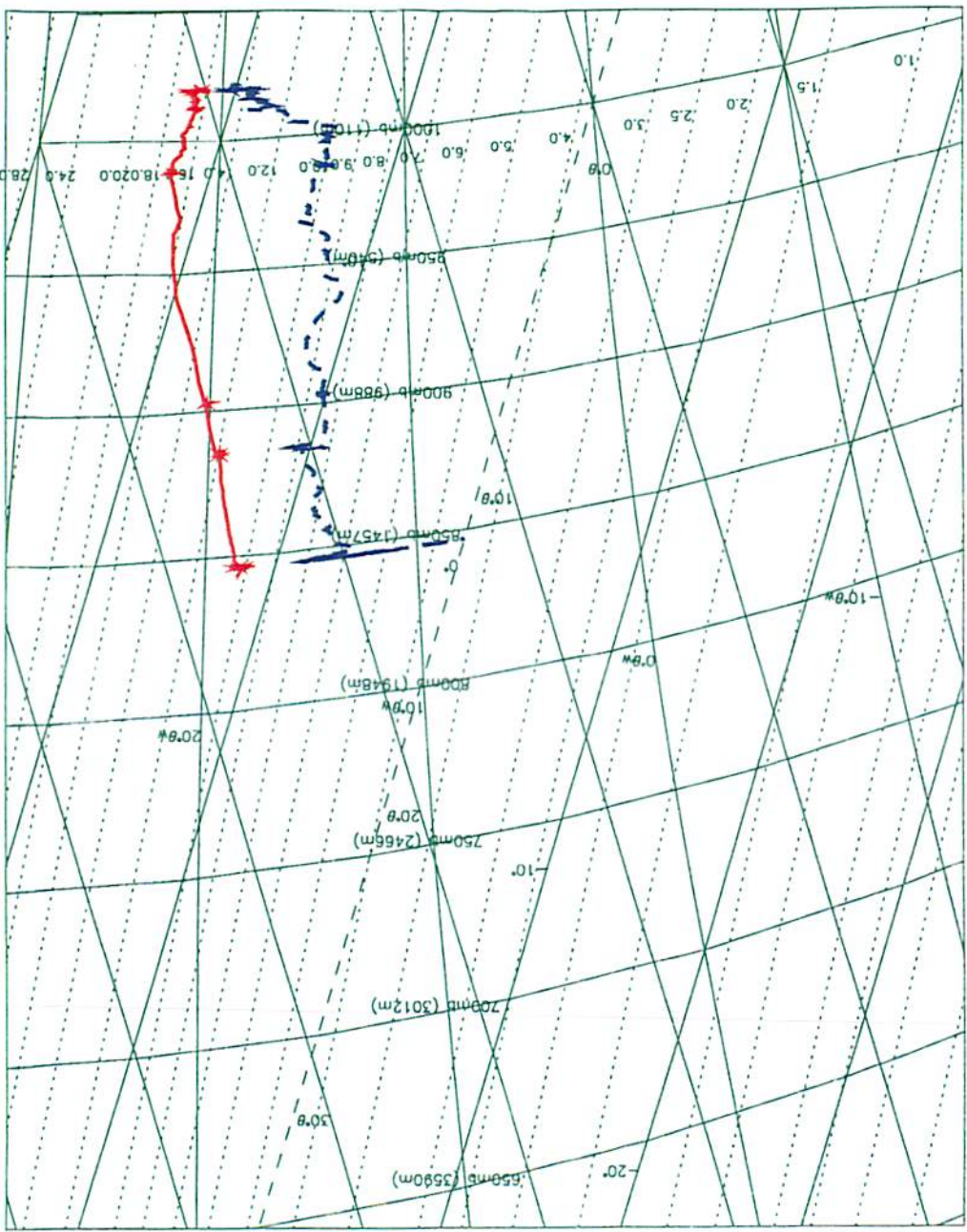
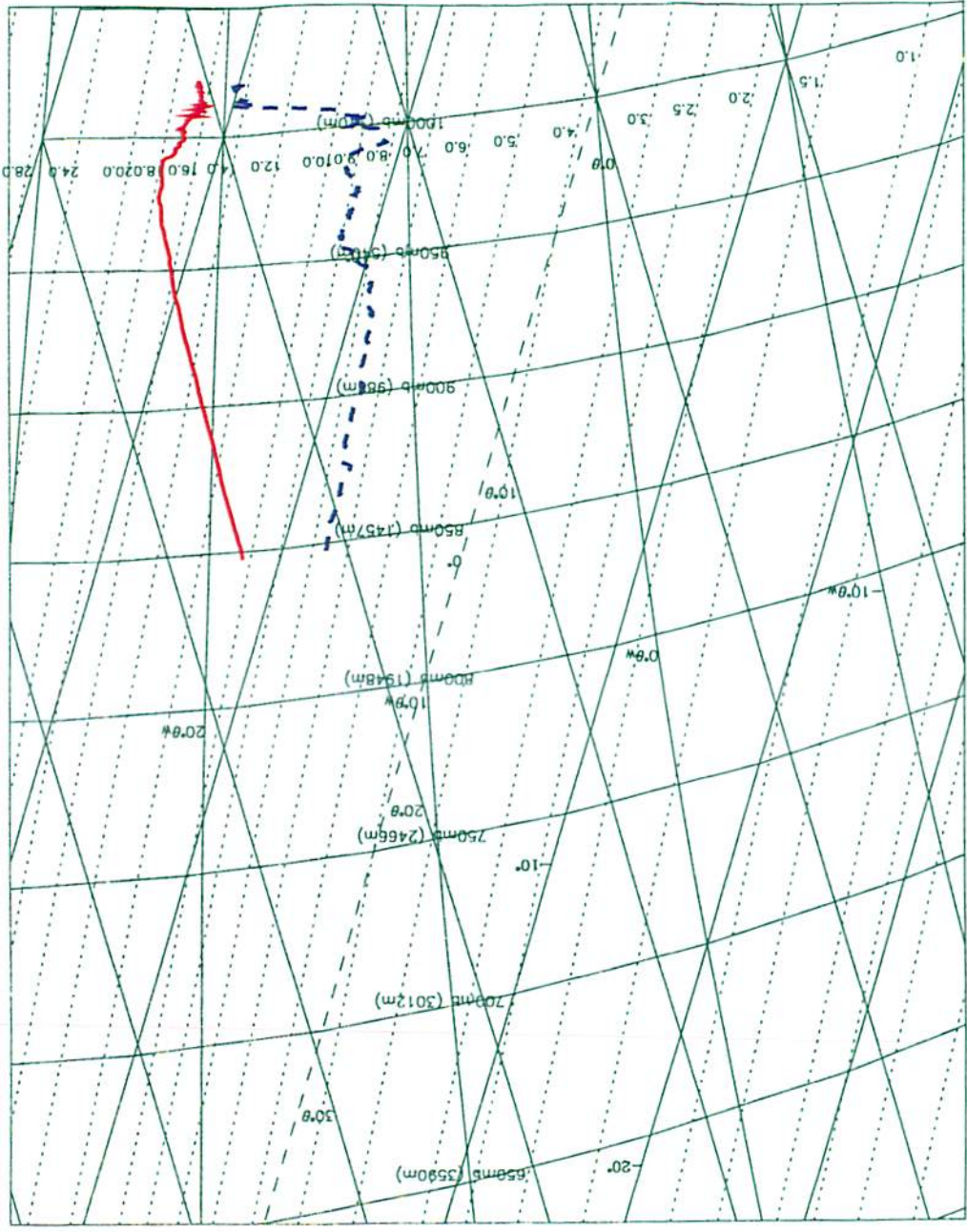
P5 5000'-50'(123850-125615) + p5up 50'-5200'(125615-131207)





A571 18-AUG-97

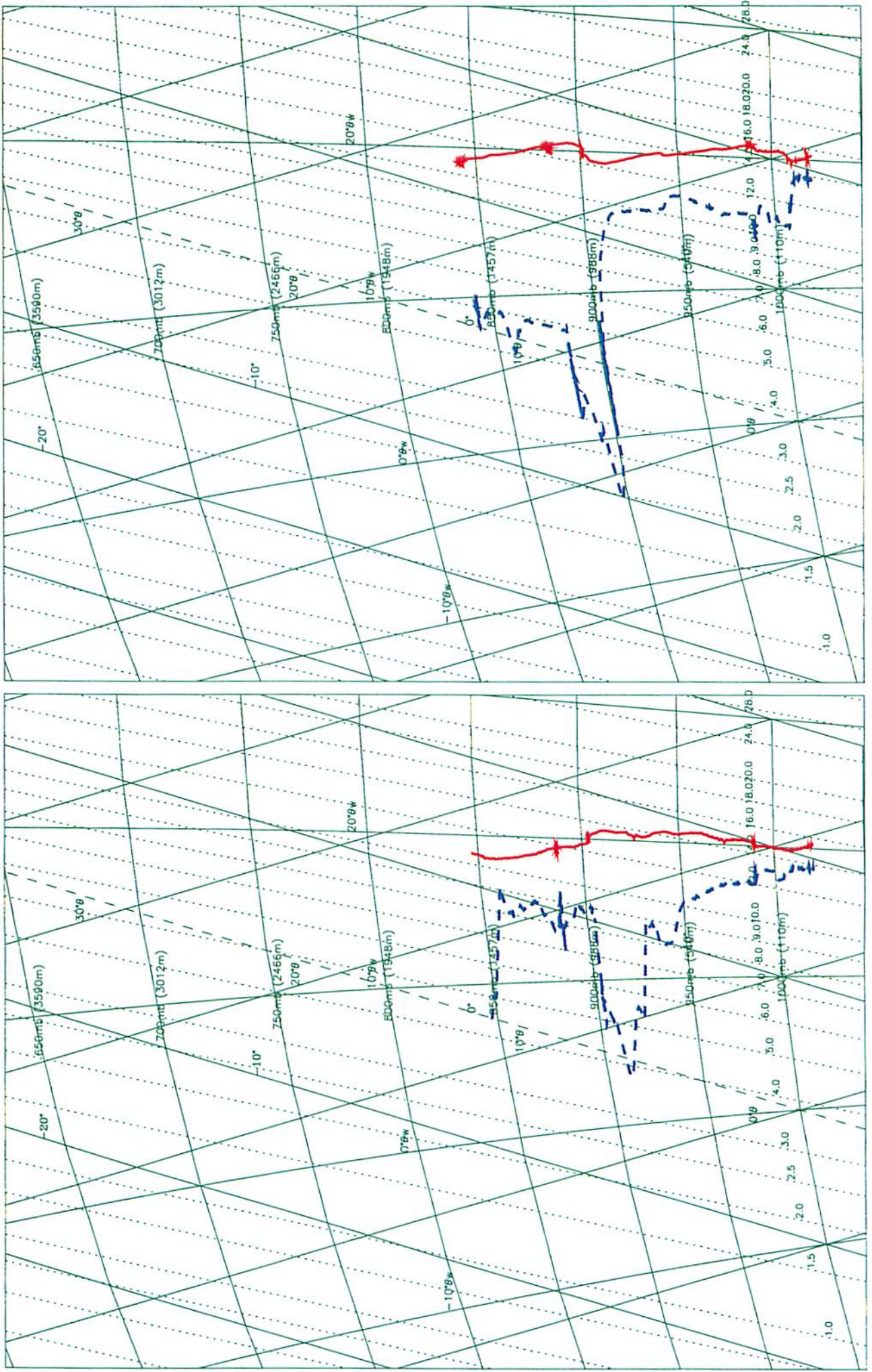
P6 5200'-50'(131207-131847) + P7 50'-5200'(131847-134012)





A571 18-AUG-97

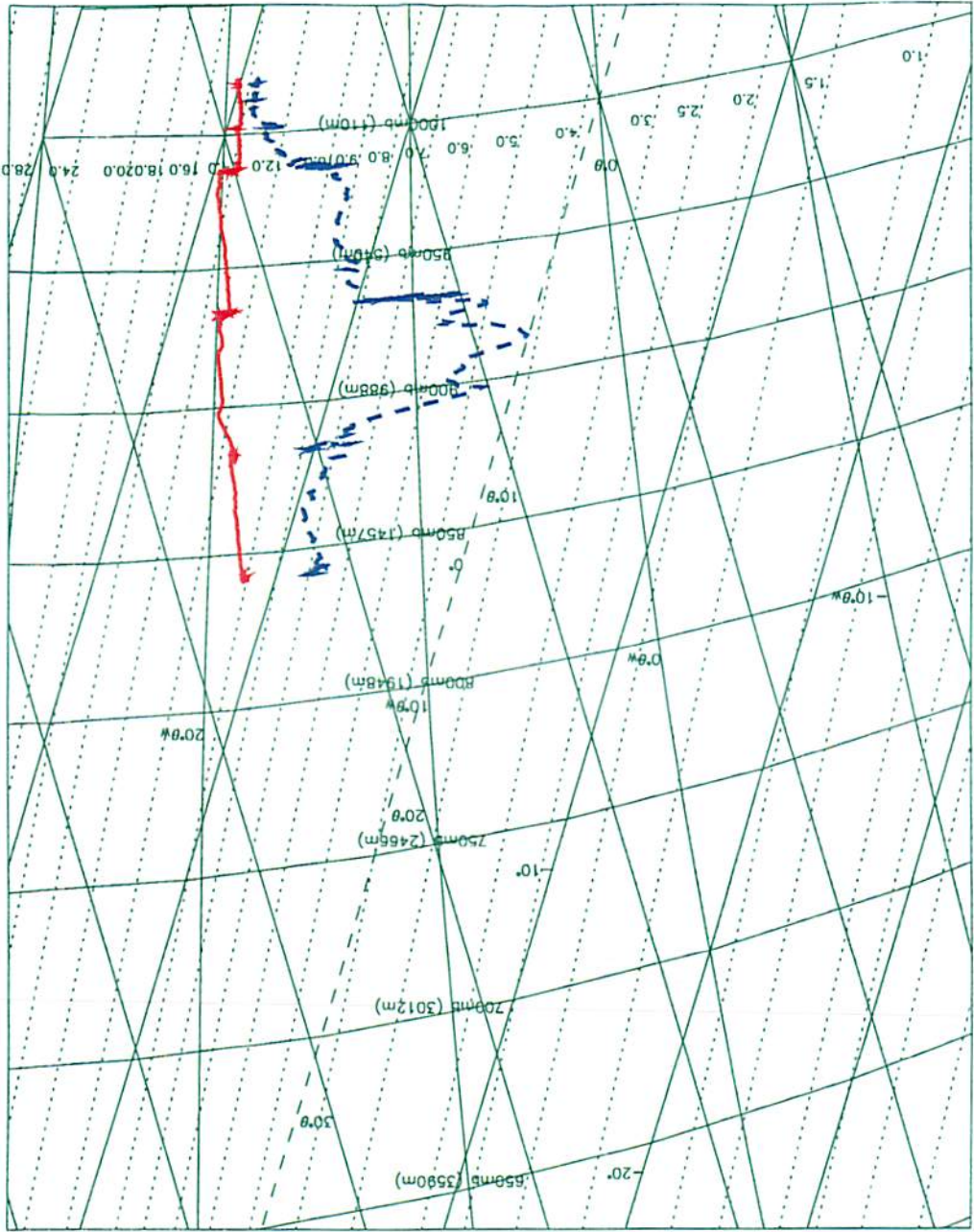
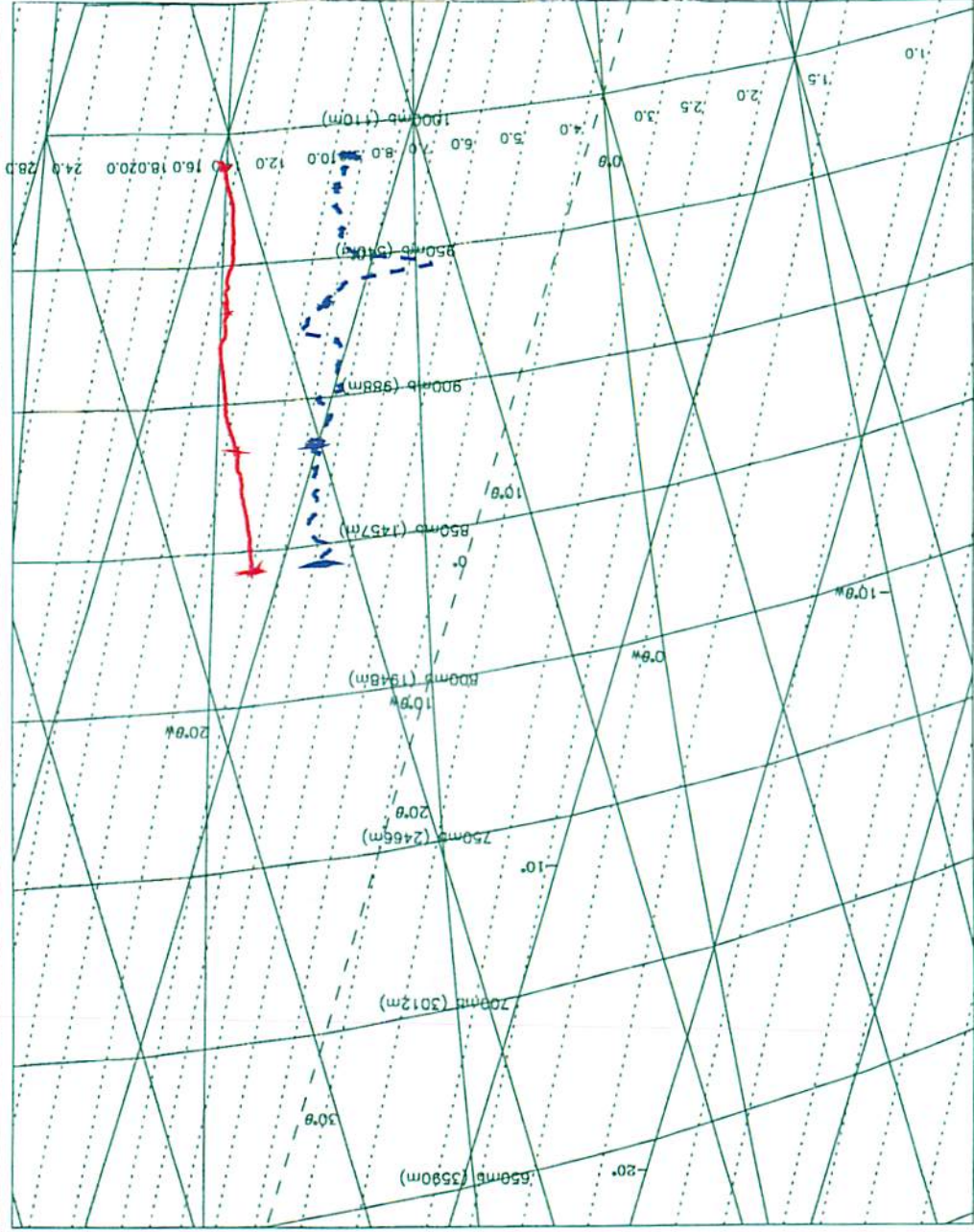
P8 5200'-50'(134012-135150) + P9 50'-5300'(135150-141655)





A571 18-AUG-97

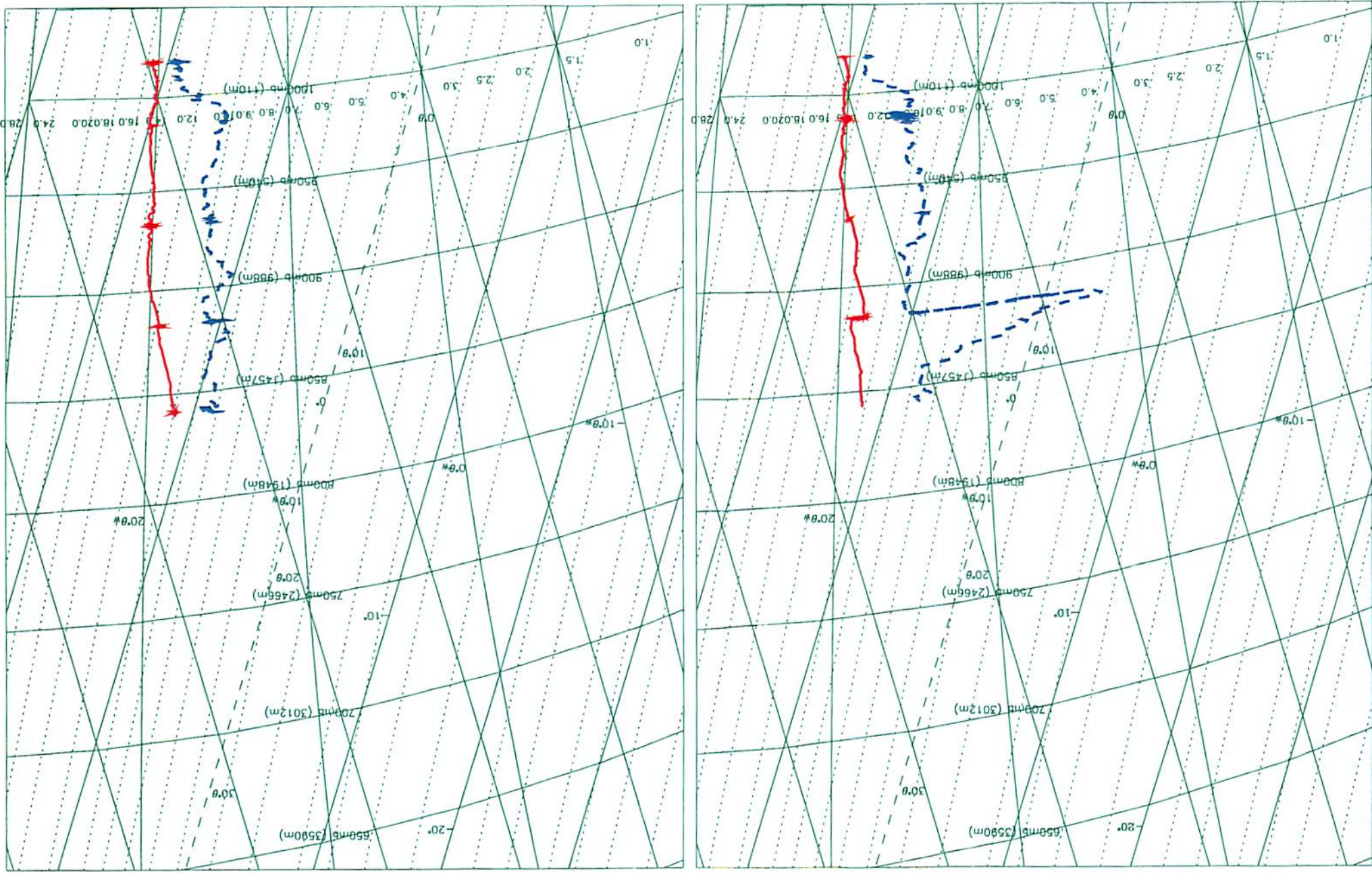
P10 5300'-50'(144135-145307) + P11 50'-5300'(145513-151222)





A571 18-AUG-97

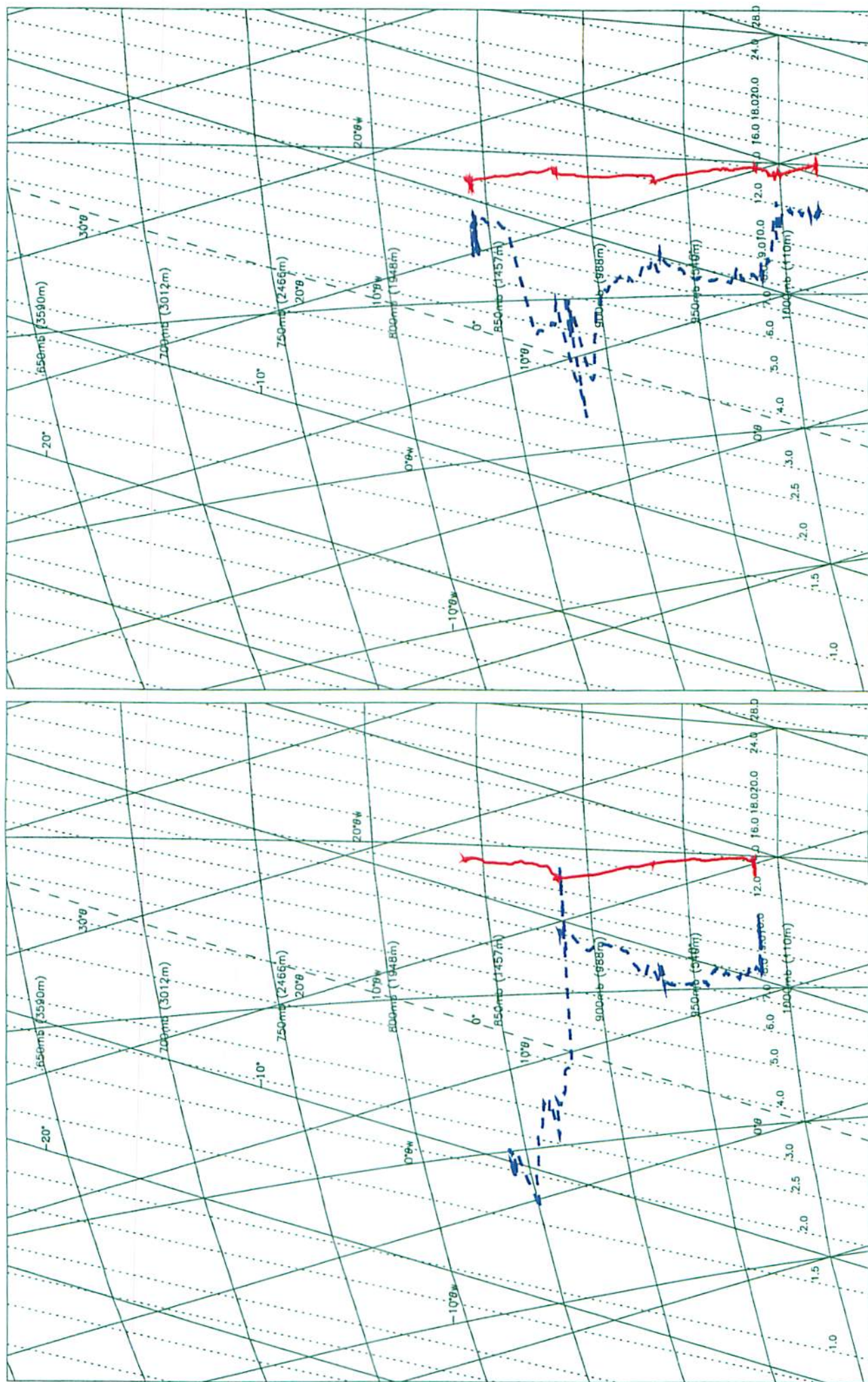
P12 5300'-50'(151222-152737) + P13 50'-5300'(152737-154353)





A571 18-AUG-97

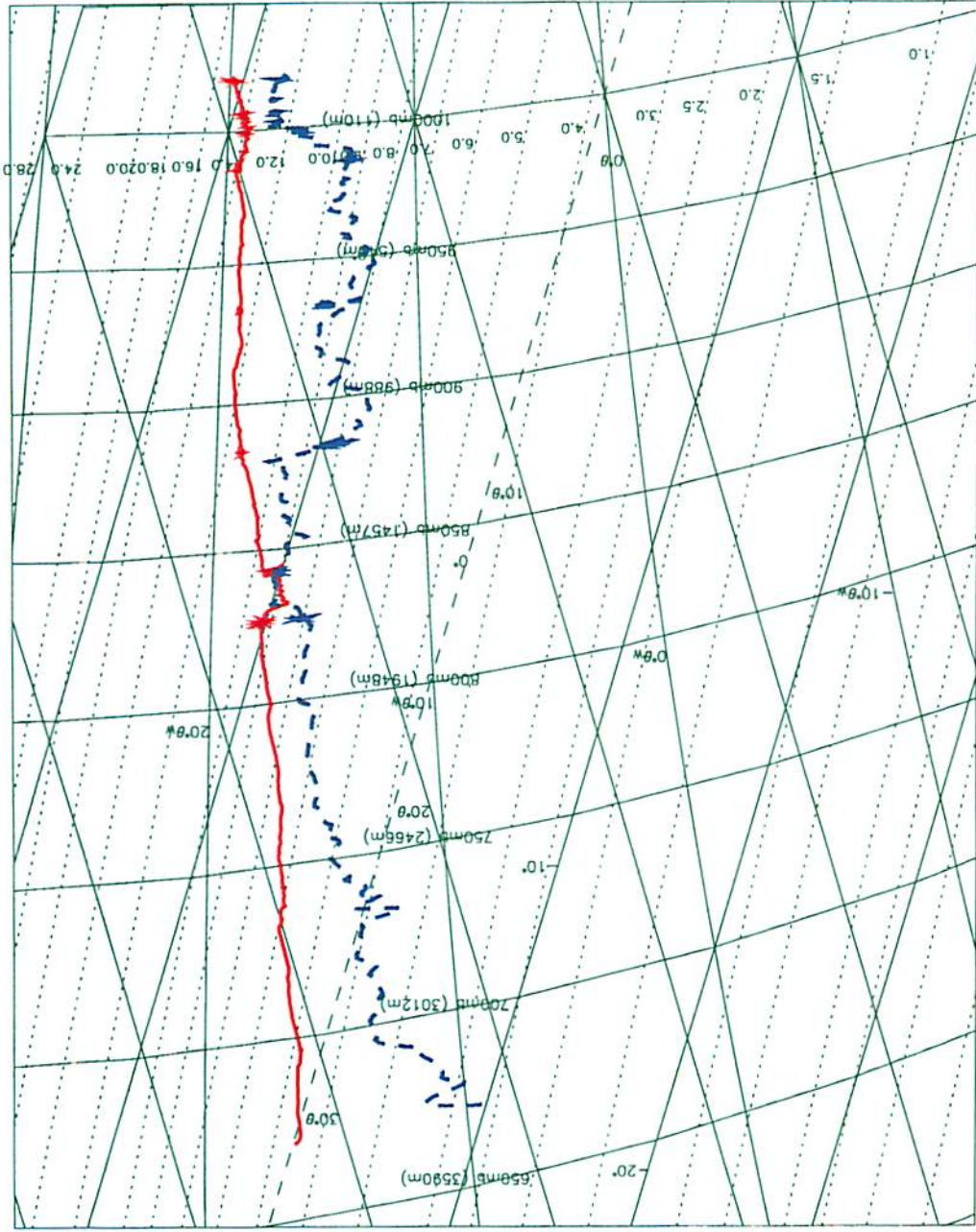
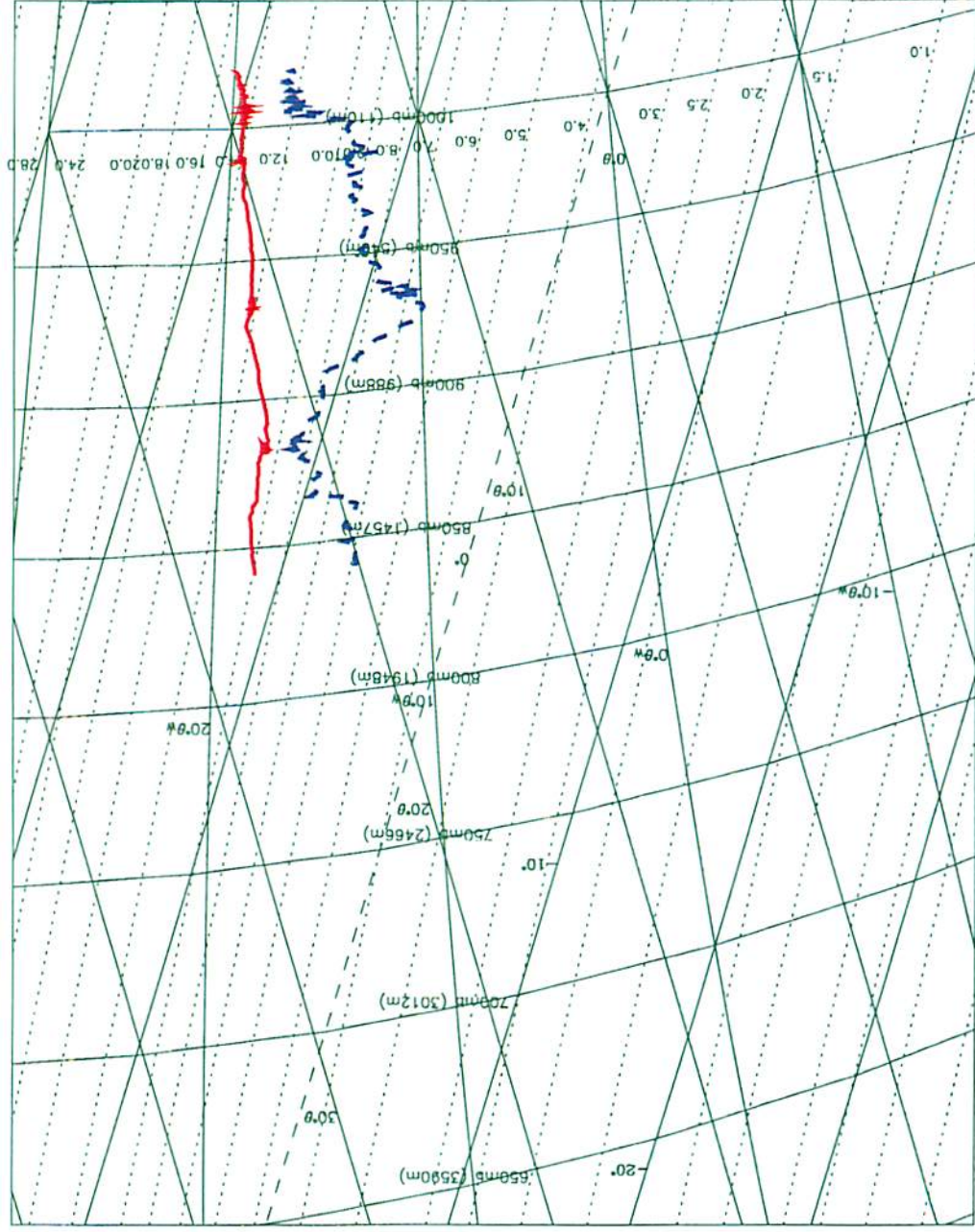
P14 5300'-50'(155740-160903) + P15 50'-5300'(161121-162710)



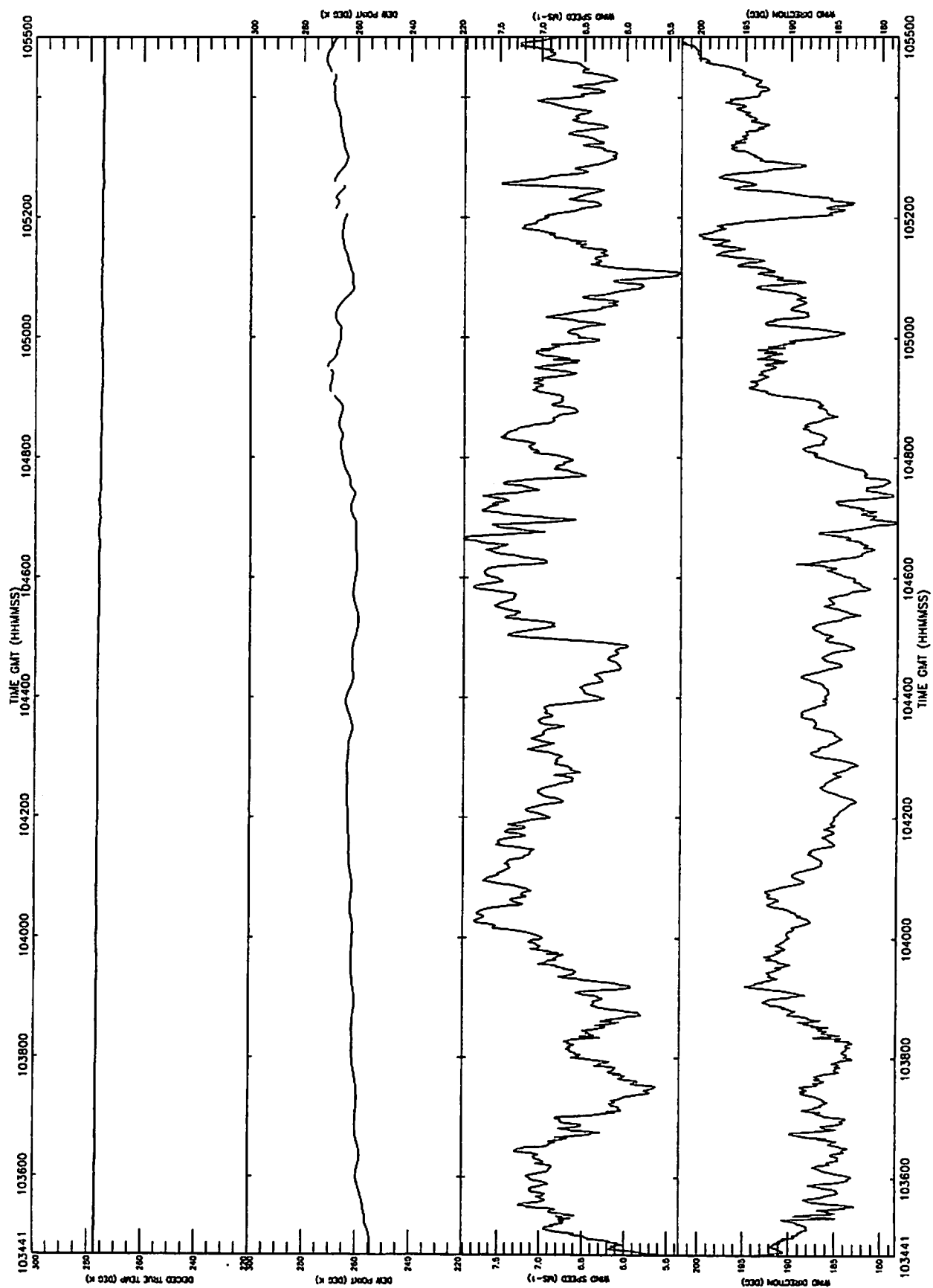


A571 18-AUG-97

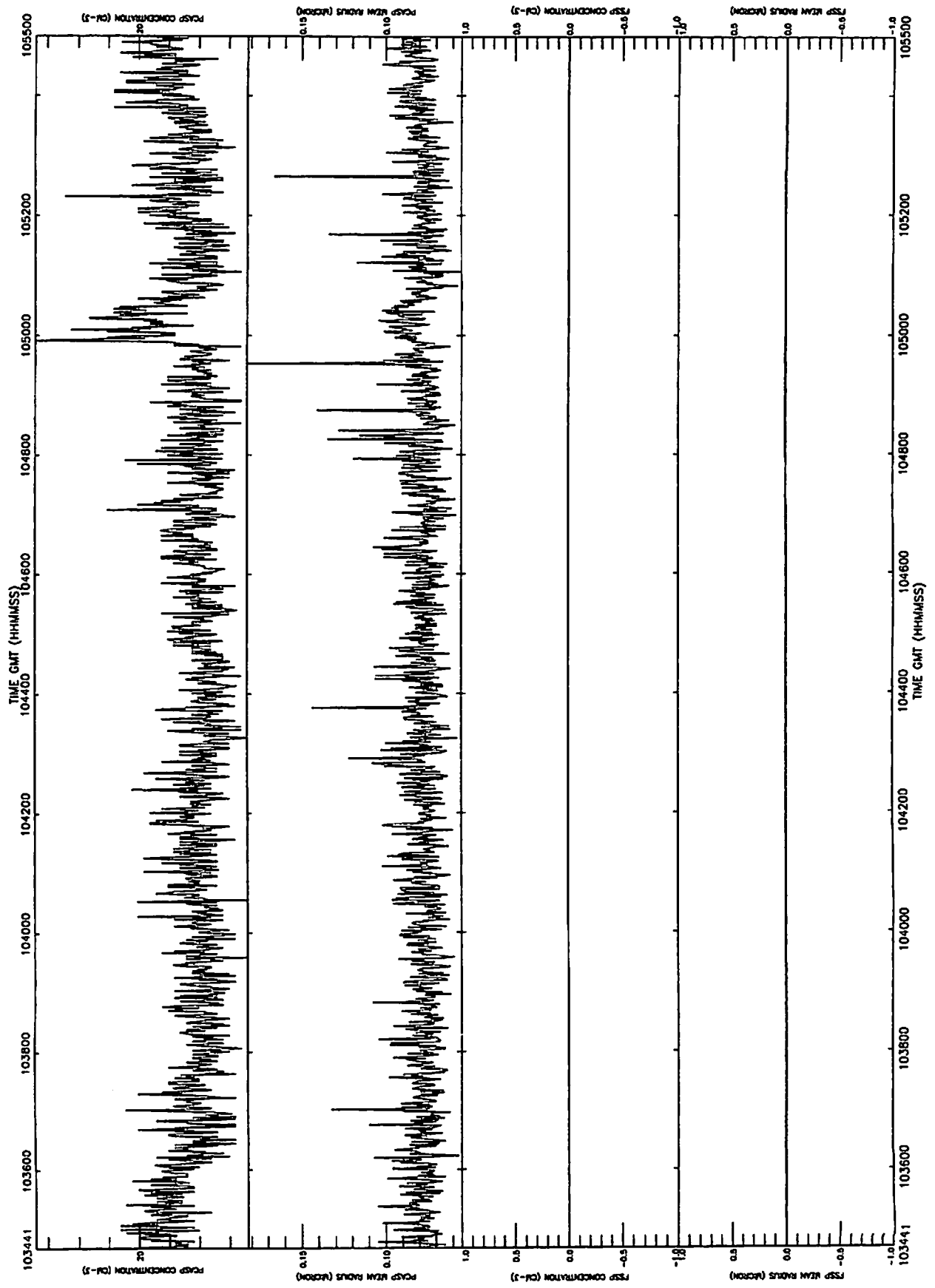
P16 5300'-50'(162710-163853) + P17 50'-FL110(163853-170335)



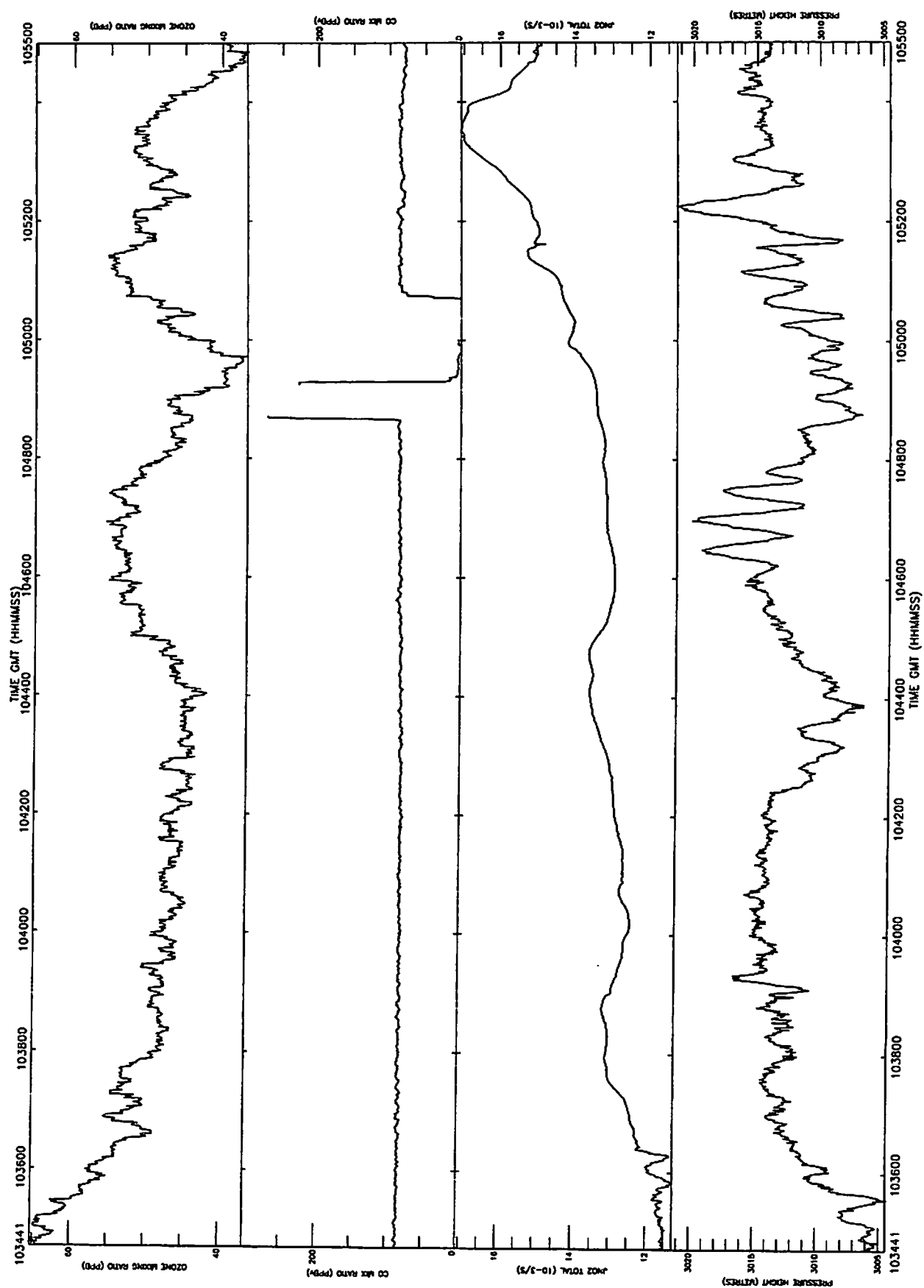
A571 18-AUG-97 R1 FL100 From 103441-105500 Plotted 11-Dec-1997 08:39



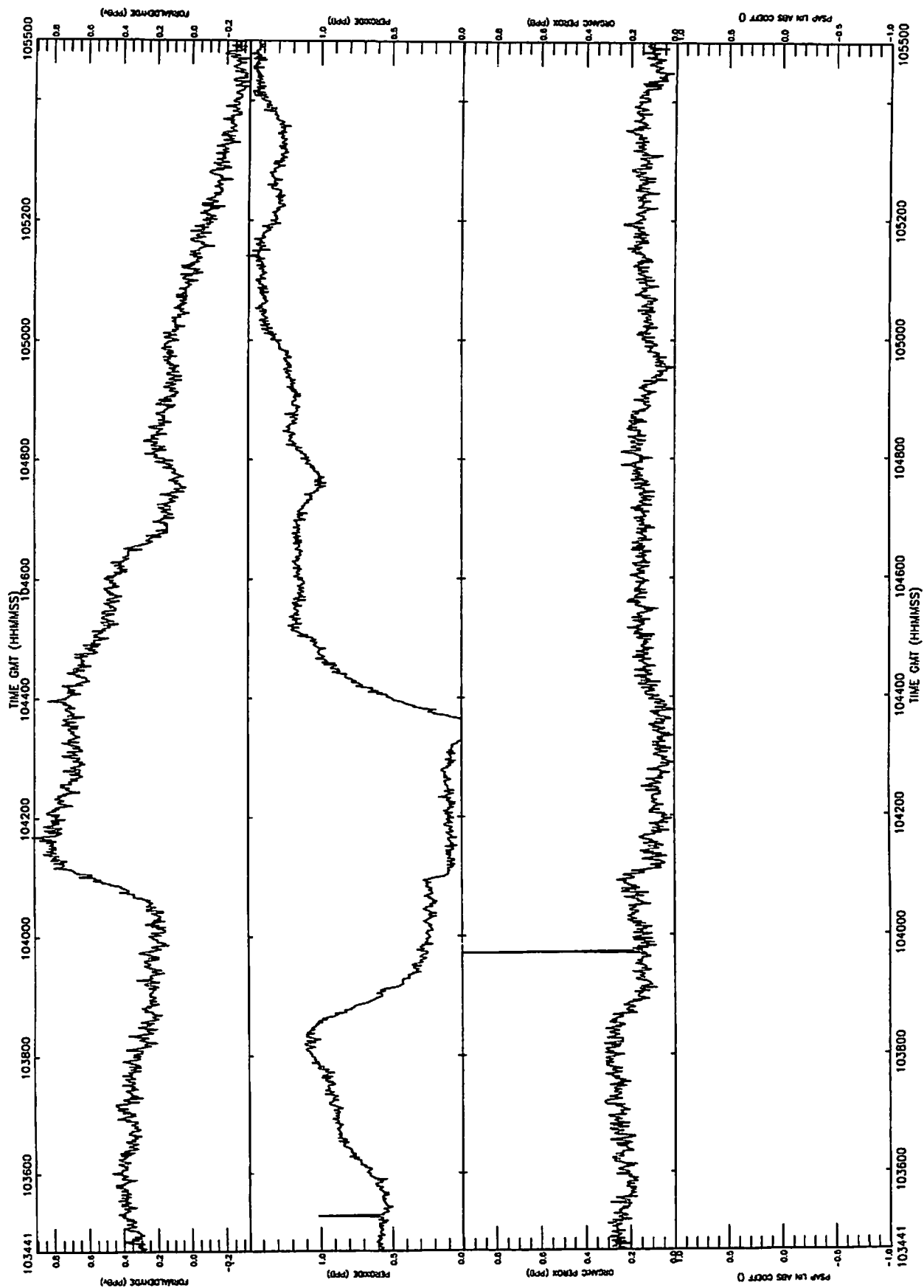
A571 18-AUG-97 R1 FL100 From 103441-105500 Plotted 12-Dec-1997 13:51



A571 18-AUG-97 R1 FL100 From 103441-105500 Plotted 11-Dec-1997 08:39

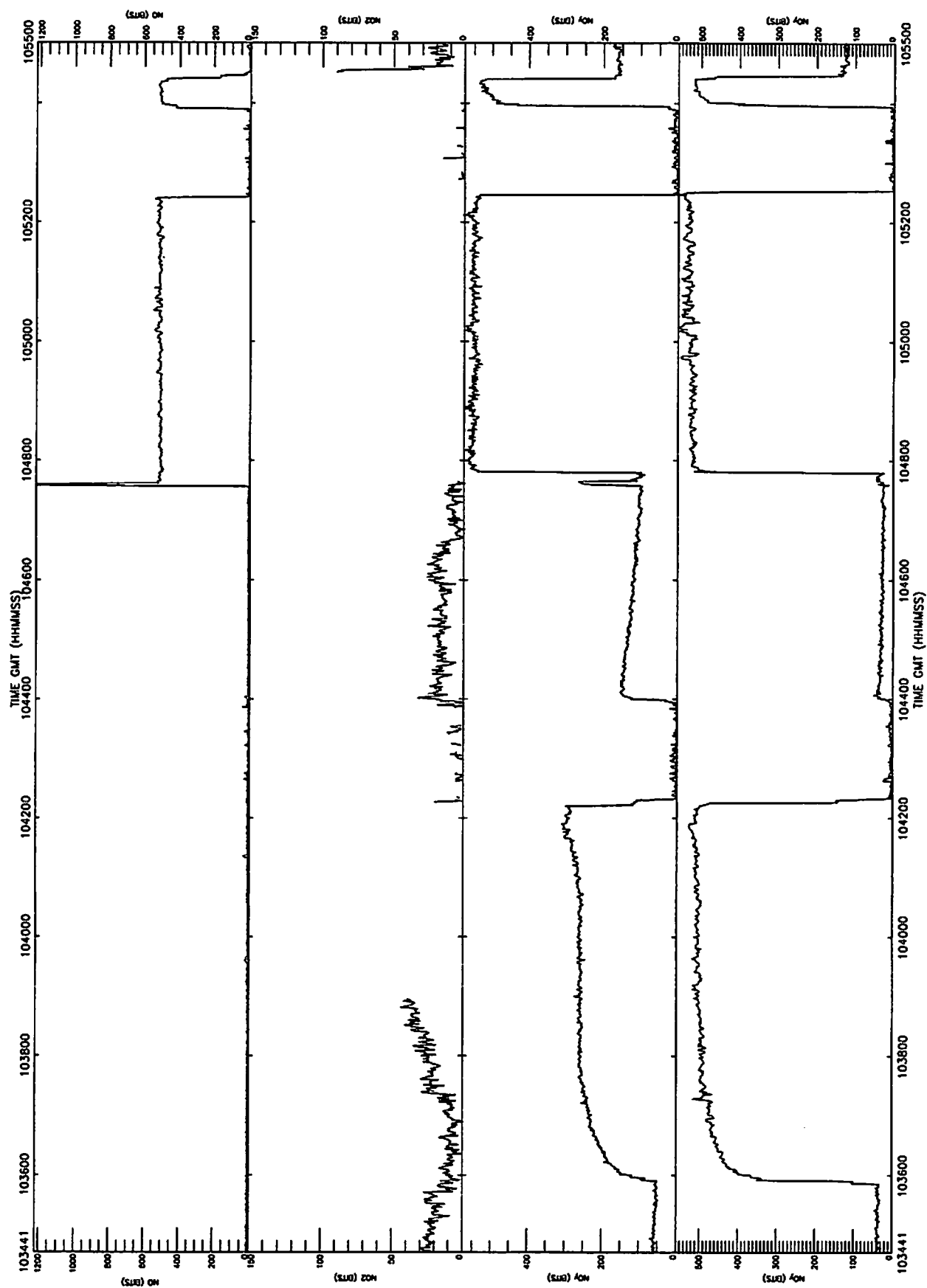


A571 18-AUG-97 R1 FL100 From 103441-105500 Plotted 11-Dec-1997 08:39





A571 18-AUG-97 R1 FL100 From 103441-105500 Plotted 11-Dec-1997 14:13



A571 18-AUG-97 R1 FL100 From 103441-105500 *Plotted 12-Dec-1997 13:51*

STATIC PRESSURE (MB)

No of obs 1220  
Mean 699.963  
Standard dev 0.253849  
Max value 700.685  
Min value 699.181

DEICED TRUE TEMP (DEG K)

No of obs 1220  
Mean 276.391  
Standard dev 0.713303  
Max value 277.440  
Min value 275.034

DEW POINT (DEG K)

No of obs 1220  
Mean 263.110  
Standard dev 3.45029  
Max value 271.664  
Min value 254.393

OZONE MIXING RATIO (PPB)

No of obs 1220  
Mean 49.0401  
Standard dev 5.08286  
Max value 65.2713  
Min value 36.7189

PCASP CONCENTRATION (CM-3)

No of obs 1220  
Mean 11.2521  
Standard dev 4.36051  
Max value 37.0144  
Min value 2.00000

FSSP CONCENTRATION (CM-3)

No of obs 1220  
Mean 0.000000  
Standard dev 0.000000  
Max value 0.000000  
Min value 0.000000

PRESSURE HEIGHT (METRES)

No of obs 1220  
Mean 3012.55  
Standard dev 2.85096  
Max value 3021.33  
Min value 3004.44

CORRECTED LATITUDE (DEGREES)

No of obs 1220  
Mean 52.2143  
Standard dev 0.151539  
Max value 52.4386  
Min value 51.9186

CORRECTED LONGITUDE (DEGREES)

No of obs 1220  
Mean -1.01726  
Standard dev 0.529853  
Max value -7.770211e-02  
Min value -1.90425

NORTHWARD WIND COMPT (M S-1)

No of obs 1220  
Mean 6.69482  
Standard dev 0.500366  
Max value 7.90555  
Min value 5.21112

EASTWARD WIND COMPT (M S-1)

No of obs 1220  
Mean 0.988623  
Standard dev 0.520570  
Max value 2.71572  
Min value -0.203735

VERTICAL WIND COMPT (M S-1)

No of obs 1220  
Mean 0.205332  
Standard dev 0.248235  
Max value 0.890930  
Min value -0.881760

WIND SPEED (MS-1)

No of obs 1220  
Mean 6.78899  
Standard dev 0.478205  
Max value 7.92373  
Min value 5.35968

WIND DIRECTION (DEG)

Mean 188.400

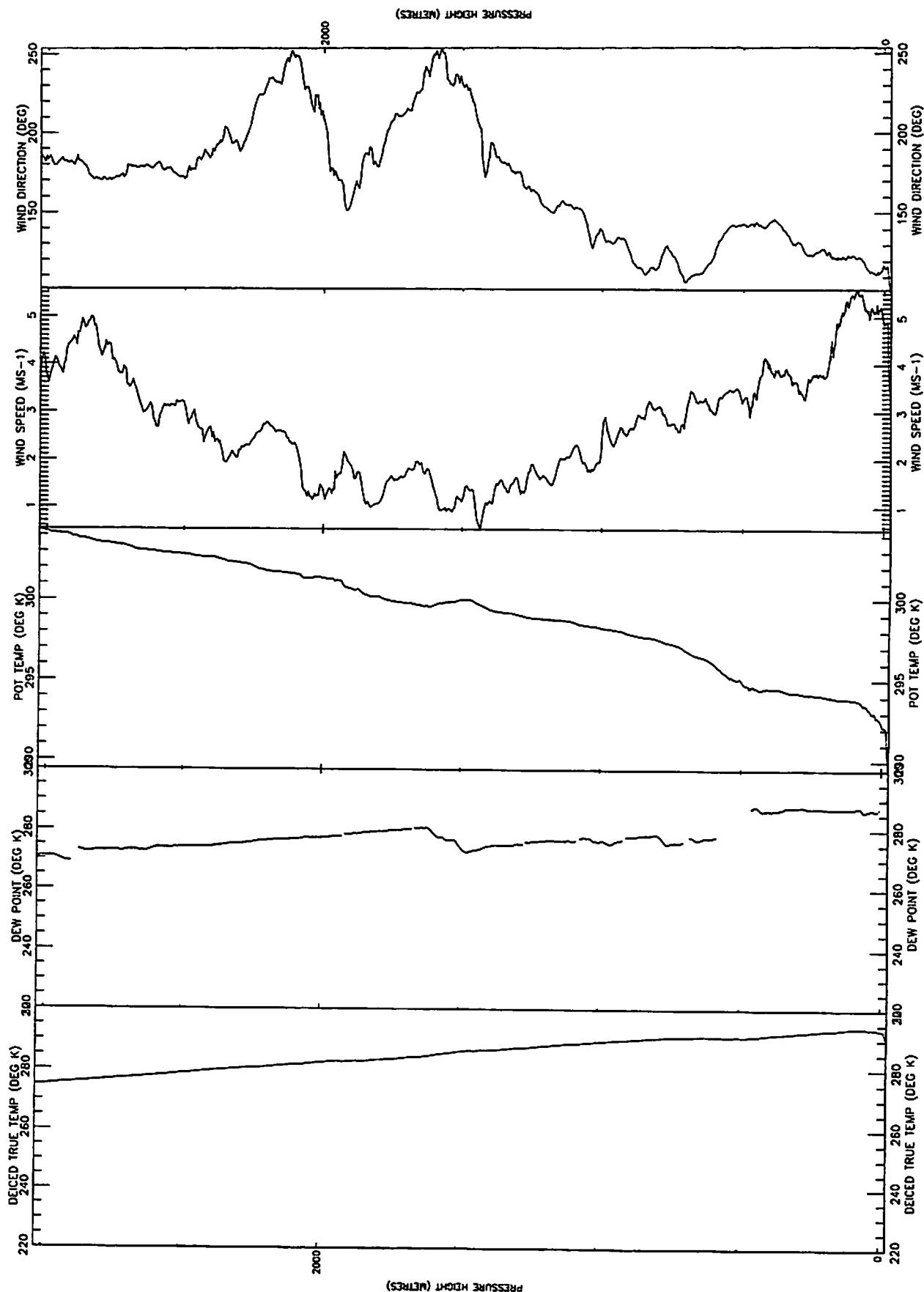
TRUE AIR SPEED (M S-1)

No of obs 1220  
Mean 110.224  
Standard dev 1.60676  
Max value 113.321  
Min value 106.613

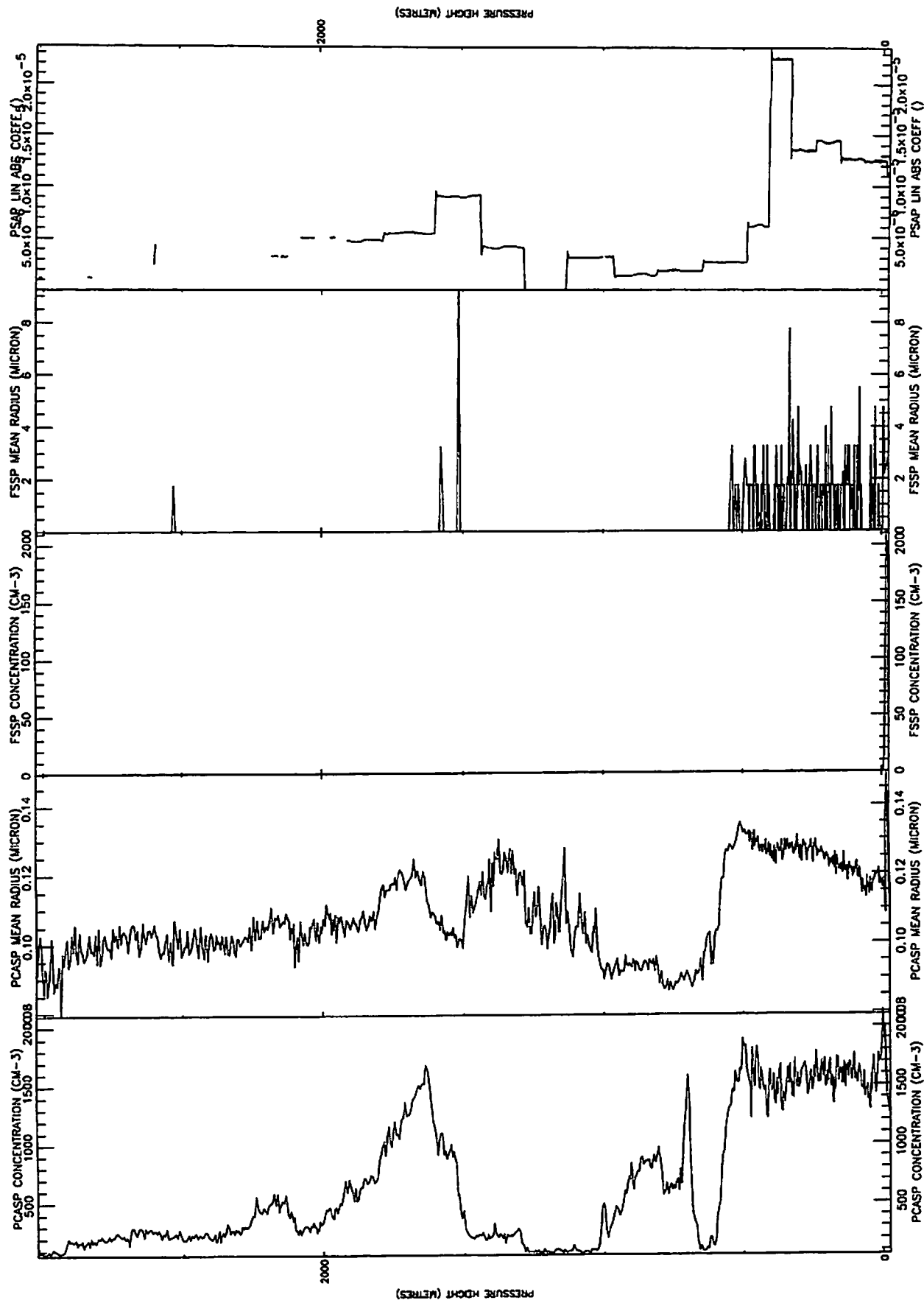
HEADING (DEG)

Mean 65.1450

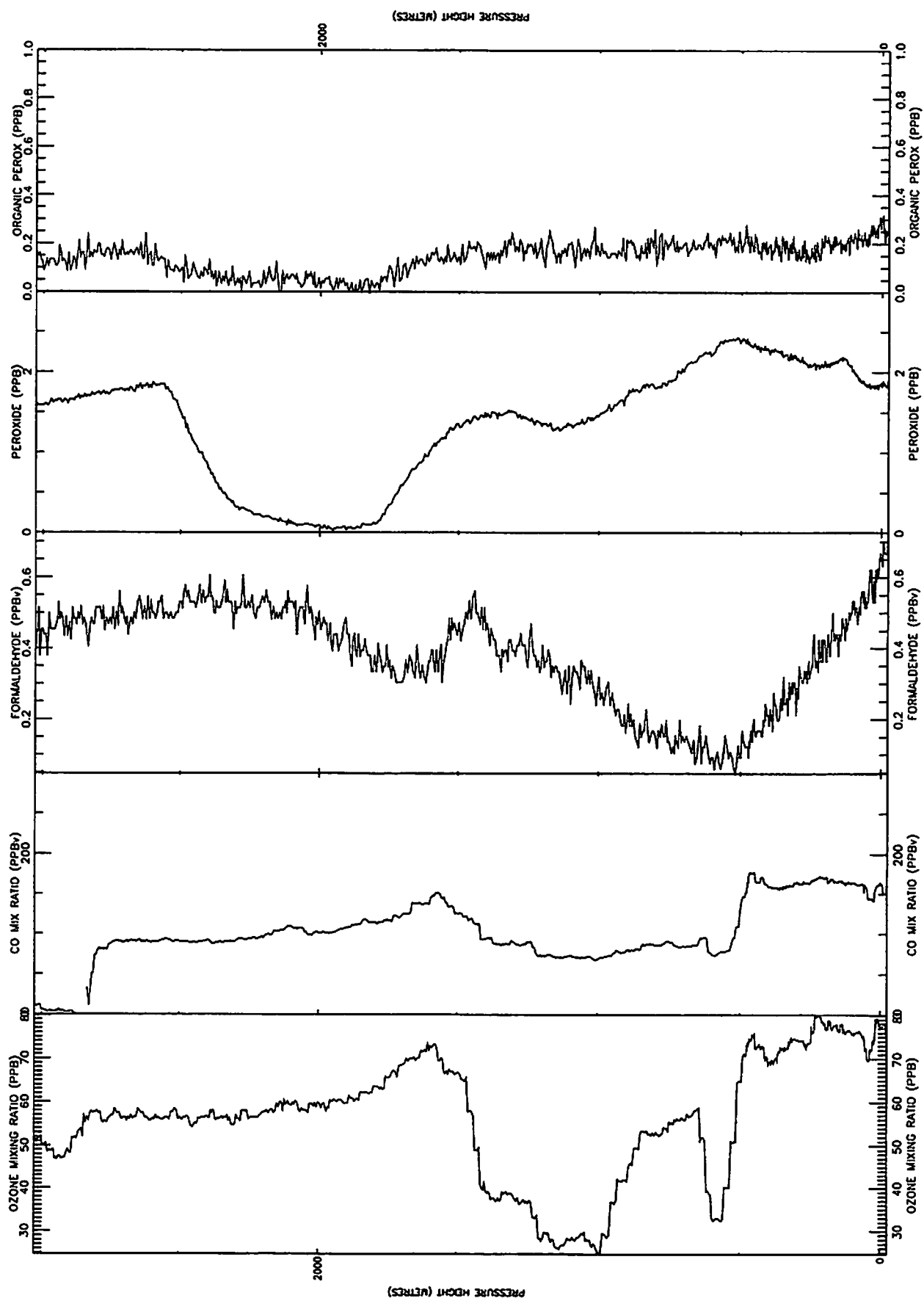
A571 18-AUG-97 P1 From 110801-111859 Plotted 11-Dec-1997 08:42



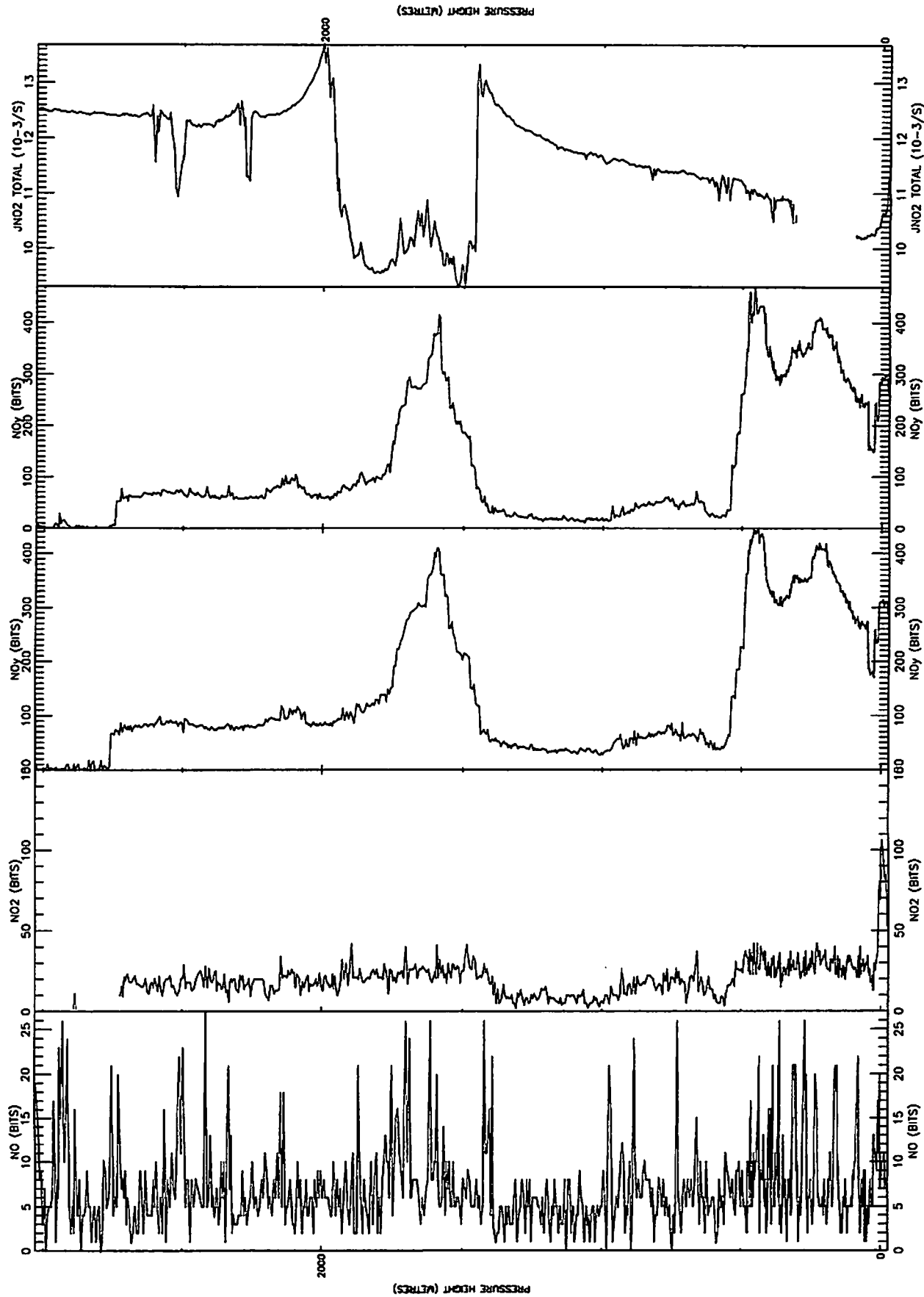
A571 18-AUG-97 P1 From 110801-111859 Plotted 12-Dec-1997 13:54



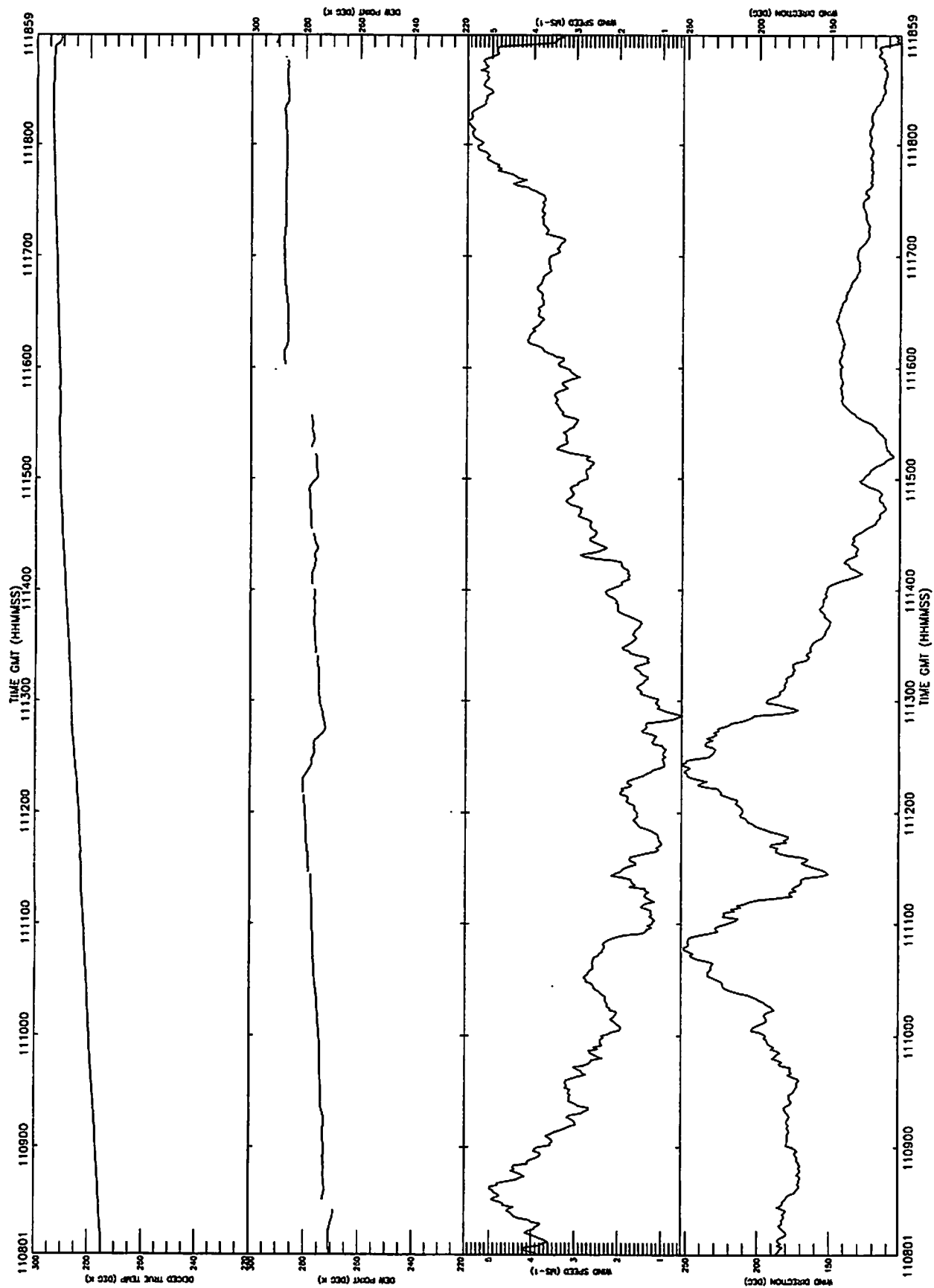
A571 18-AUG-97 P1 From 110801-111859 Plotted 11-Dec-1997 08:42



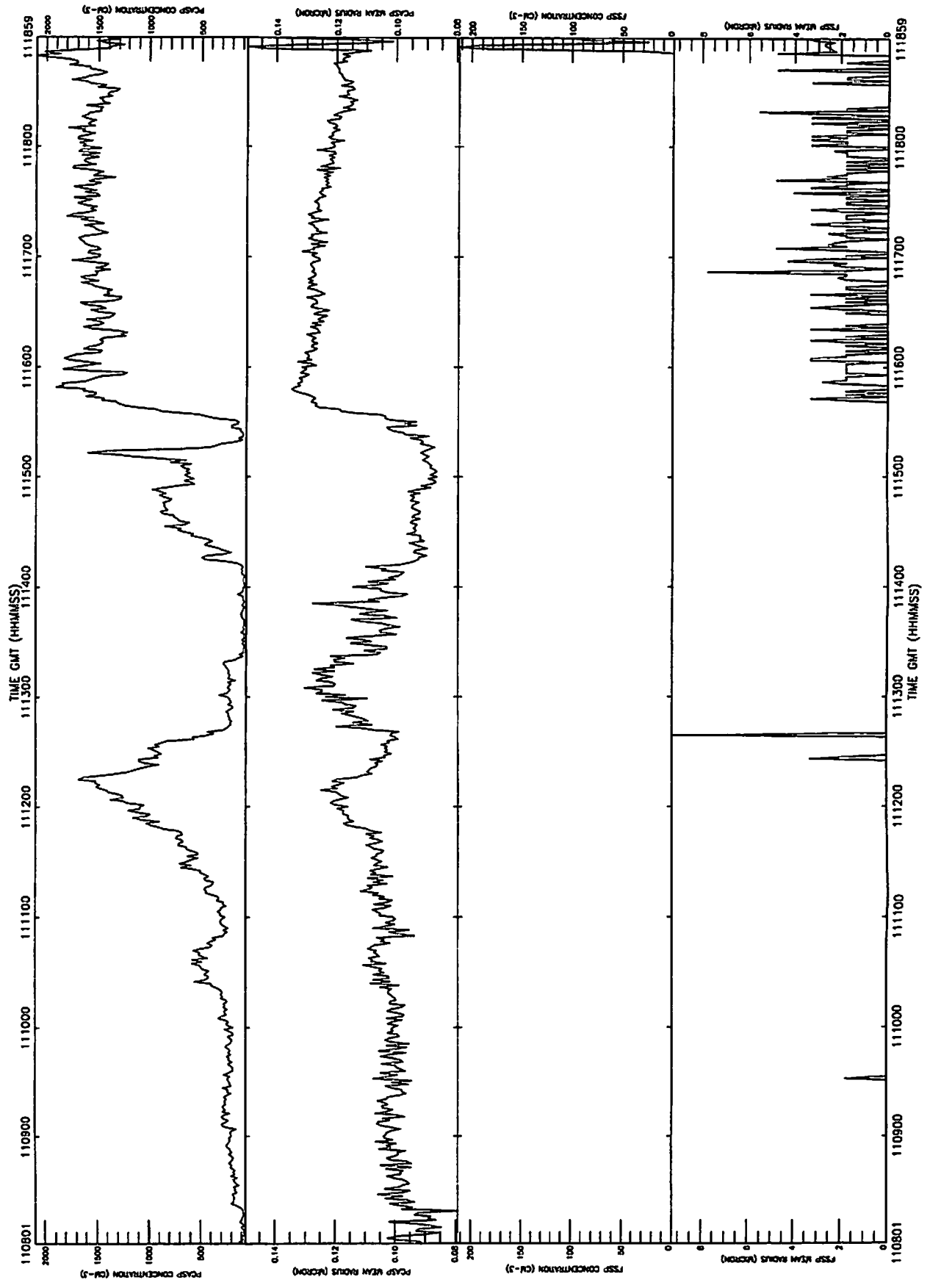
A571 18-AUG-97 P1 From 110801-111859 Plotted 11-Dec-1997 14:16



A571 18-AUG-97 P1 From 110801-111859 Plotted 11-Dec-1997 08:43

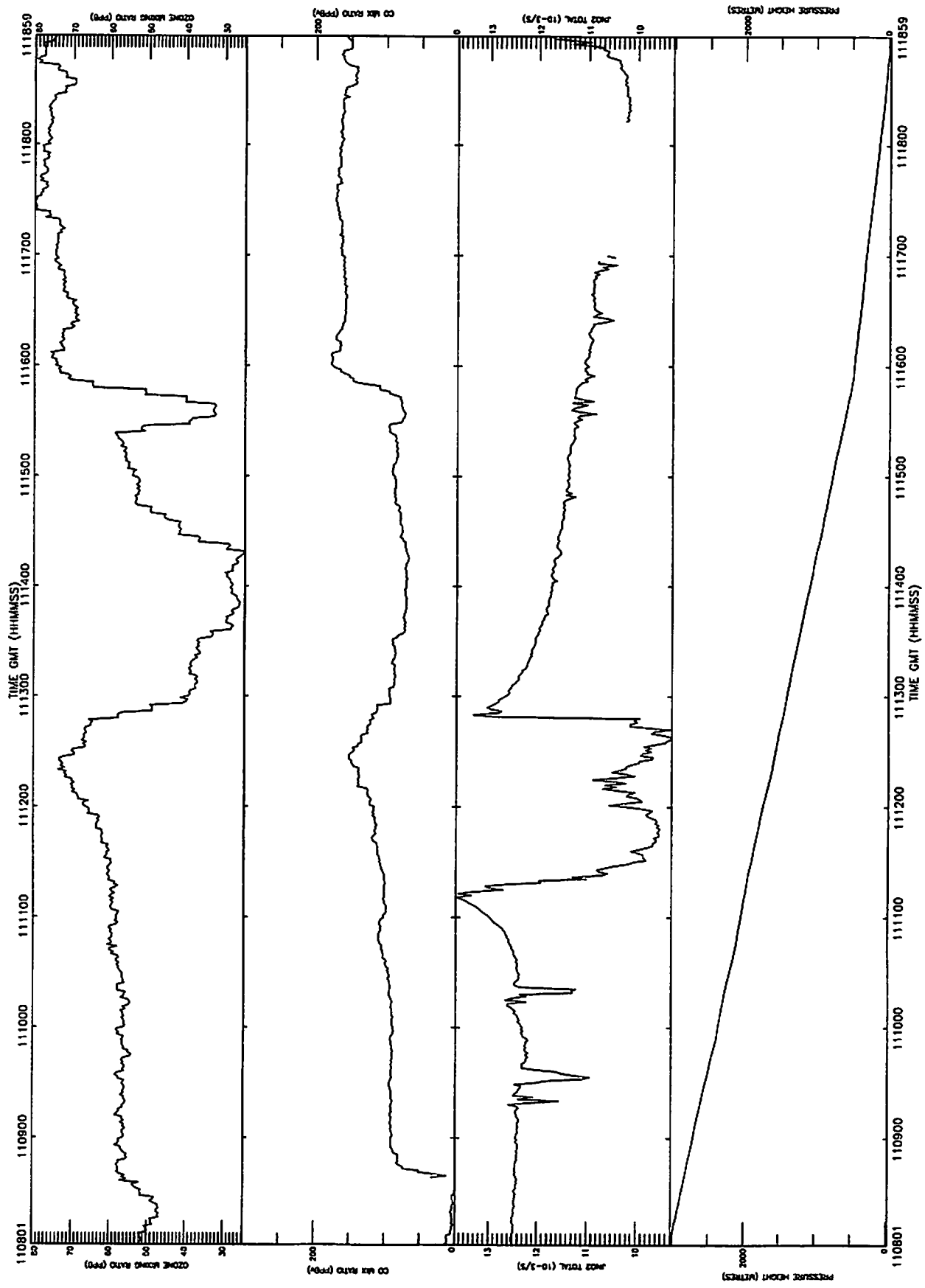


A571 18-AUG-97 P1 From 110801-111859 Plotted 12-Dec-1997 13:54

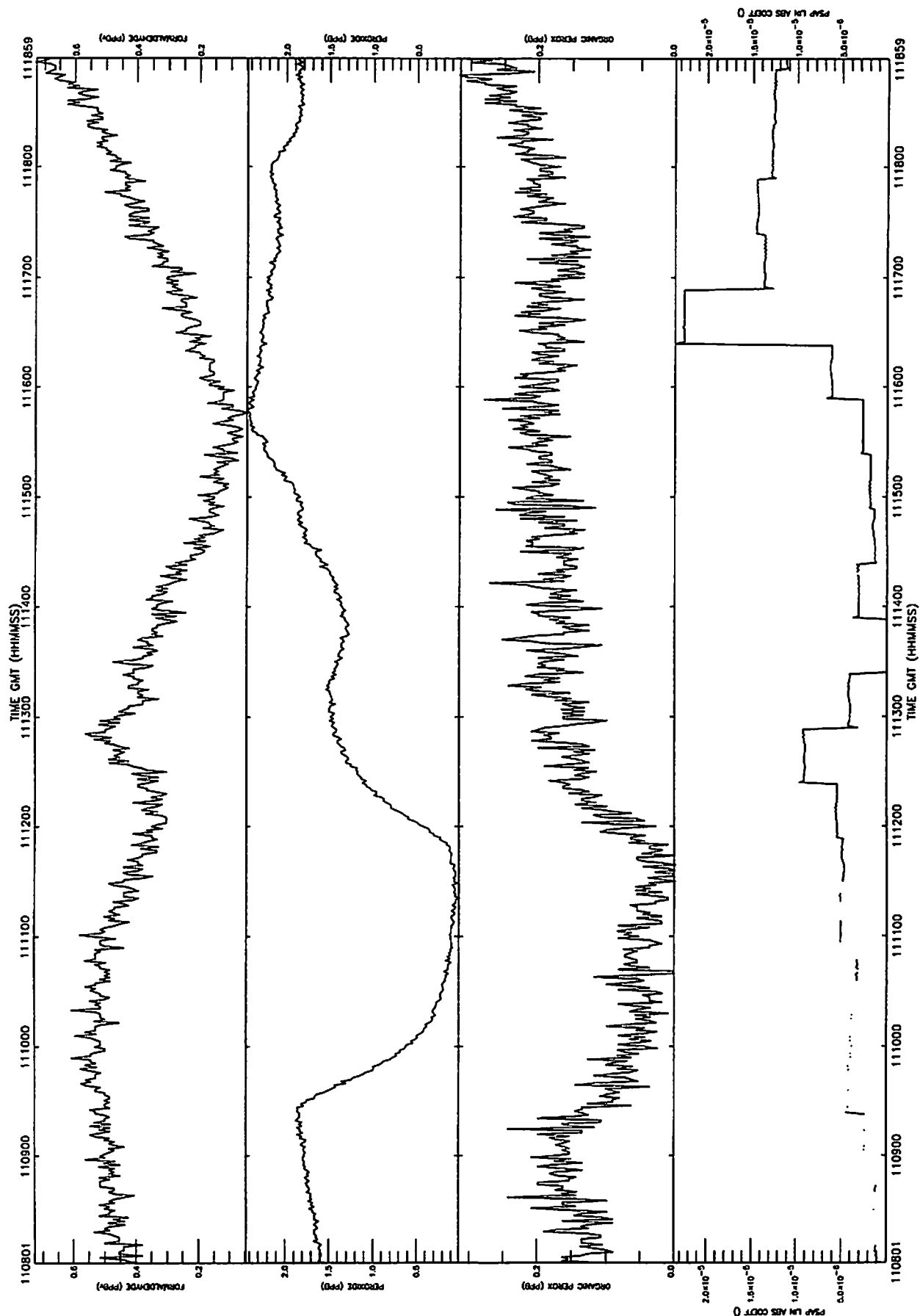




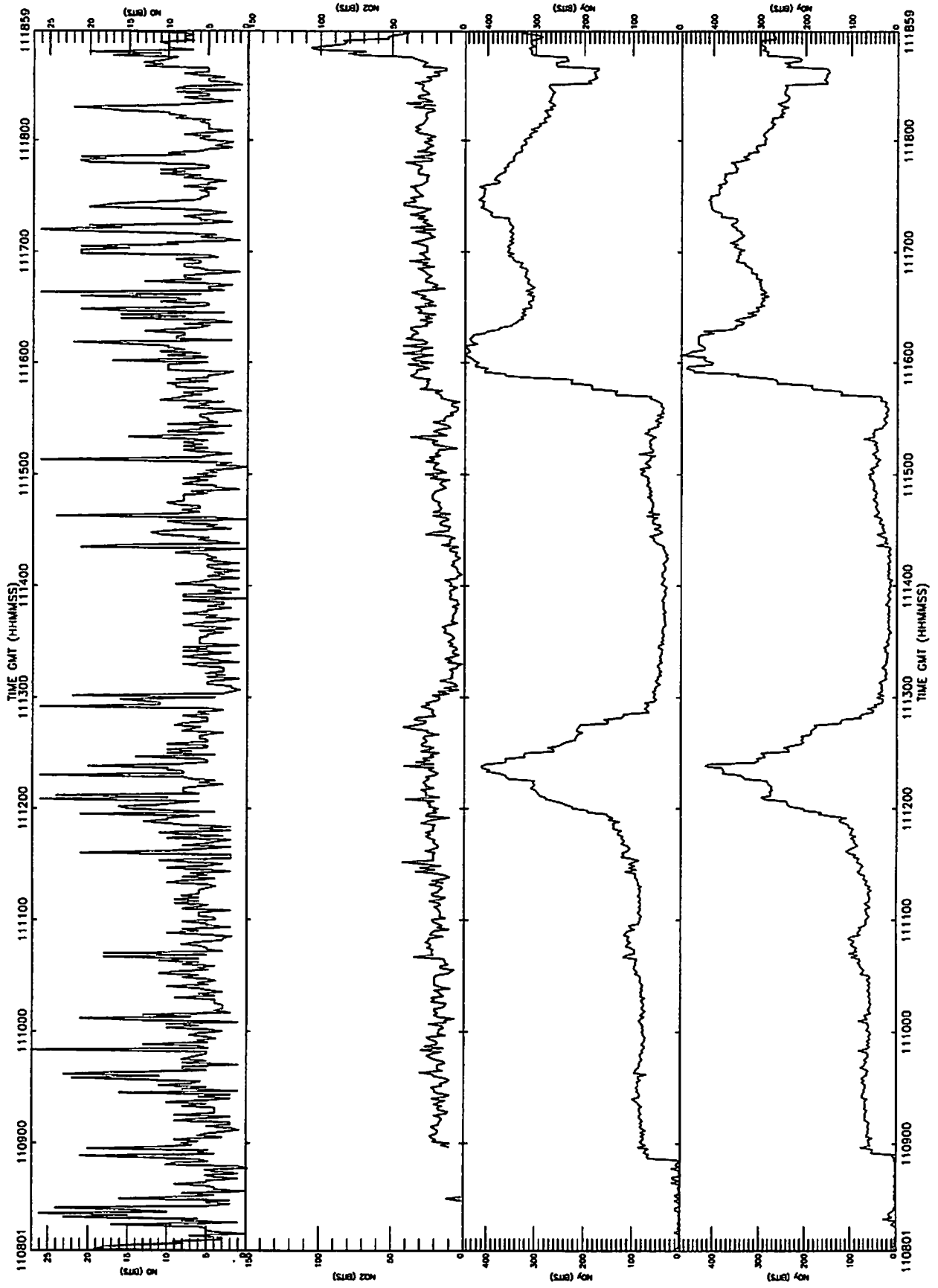
A571 18-AUG-97 P1 From 110801-111859 Plotted 11-Dec-1997 08:43



A571 18-AUG-97 P1 From 110801-111859 Plotted 11-Dec-1997 08:43



A571 18-AUG-97 P1 From 110801-111859 Plotted 11-Dec-1997 14:16



A571 18-AUG-97 P1 From 110801-111859 *Plotted 12-Dec-1997 13:54*

STATIC PRESSURE (MB)

No of obs 659  
Mean 869.038  
Standard dev 97.6533  
Max value 1016.23  
Min value 698.604

DEICED TRUE TEMP (DEG K)

No of obs 659  
Mean 286.287  
Standard dev 5.94477  
Max value 294.048  
Min value 274.764

DEW POINT (DEG K)

No of obs 659  
Mean 279.286  
Standard dev 5.70753  
Max value 291.000  
Min value 269.108

OZONE MIXING RATIO (PPB)

No of obs 659  
Mean 58.4580  
Standard dev 14.4357  
Max value 80.1339  
Min value 24.7610

PCASP CONCENTRATION (CM-3)

No of obs 659  
Mean 765.442  
Standard dev 601.645  
Max value 2096.86  
Min value 60.0429

FSSP CONCENTRATION (CM-3)

No of obs 659  
Mean 1.38996  
Standard dev 14.5423  
Max value 212.194  
Min value 0.000000

PRESSURE HEIGHT (METRES)

No of obs 659  
Mean 1318.78  
Standard dev 931.452  
Max value 3027.82  
Min value -24.7417

CORRECTED LATITUDE (DEGREES)

No of obs 659  
Mean 52.6016  
Standard dev 4.237010e-02  
Max value 52.6967  
Min value 52.5603

CORRECTED LONGITUDE (DEGREES)

No of obs 659  
Mean 1.97391  
Standard dev 0.274005  
Max value 2.41874  
Min value 1.47477

NORTHWARD WIND COMPT (M S-1)

No of obs 659  
Mean 2.11940  
Standard dev 0.993278  
Max value 4.94238  
Min value 0.267349

EASTWARD WIND COMPT (M S-1)

No of obs 659  
Mean -1.17652  
Standard dev 1.85290  
Max value 2.31503  
Min value -4.88535

VERTICAL WIND COMPT (M S-1)

No of obs 659  
Mean 1.20167  
Standard dev 0.556809  
Max value 1.89835  
Min value -0.210388

WIND SPEED (MS-1)

No of obs 659  
Mean 2.95363  
Standard dev 1.25205  
Max value 5.57911  
Min value 0.535712

WIND DIRECTION (DEG)

Mean 150.965

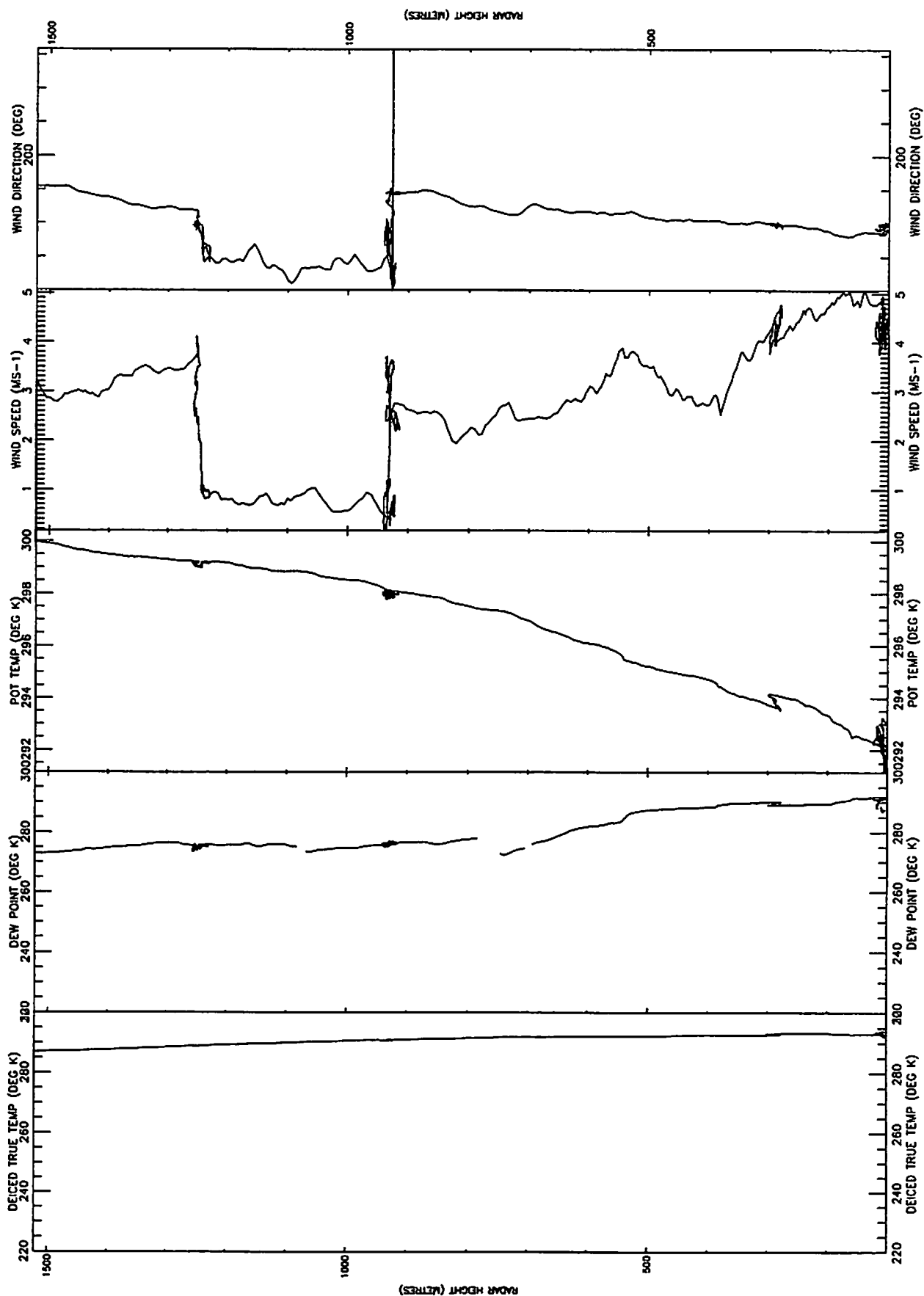
TRUE AIR SPEED (M S-1)

No of obs 659  
Mean 102.077  
Standard dev 4.80223  
Max value 112.019  
Min value 93.5498

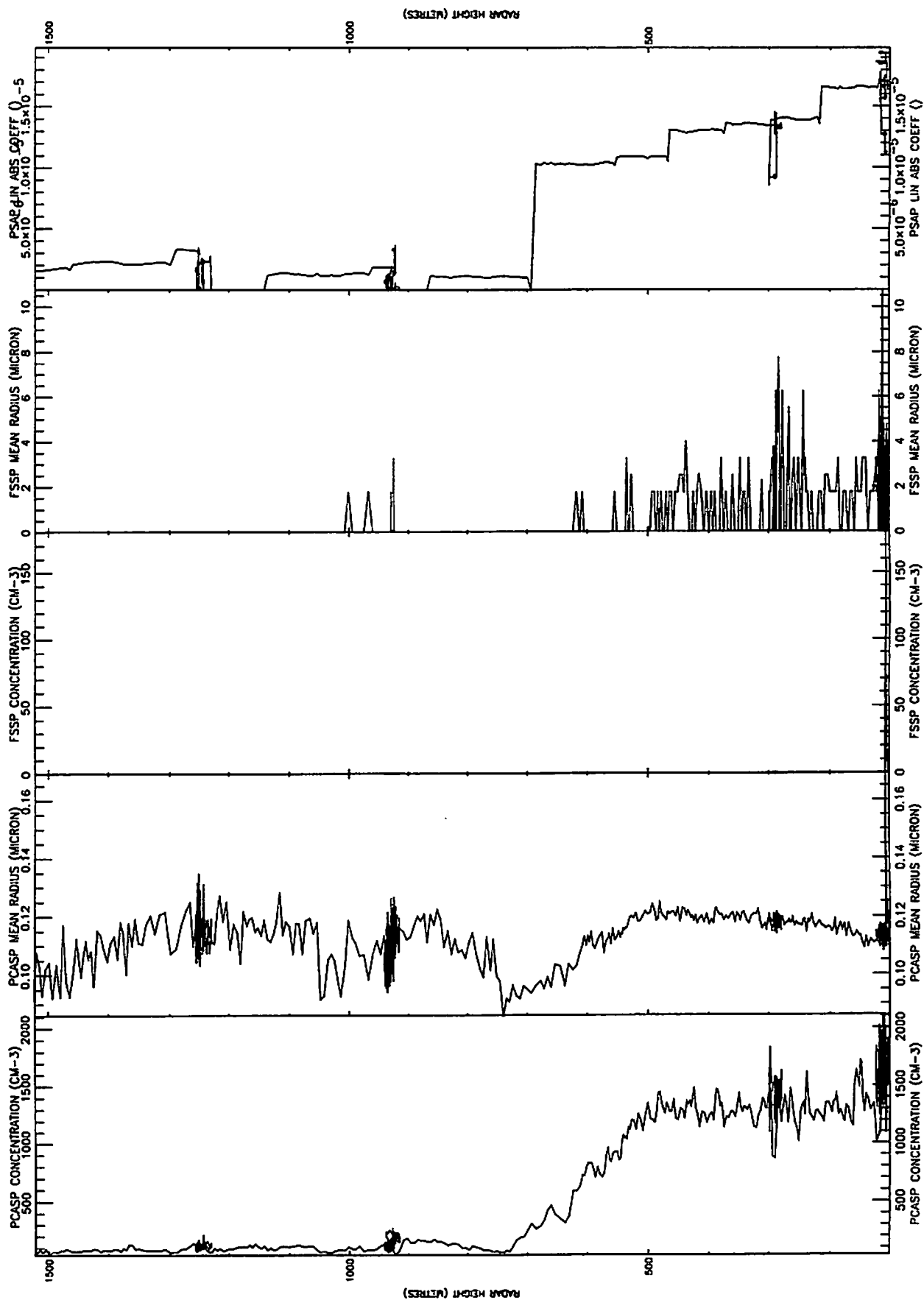
HEADING (DEG)

Mean 76.6338

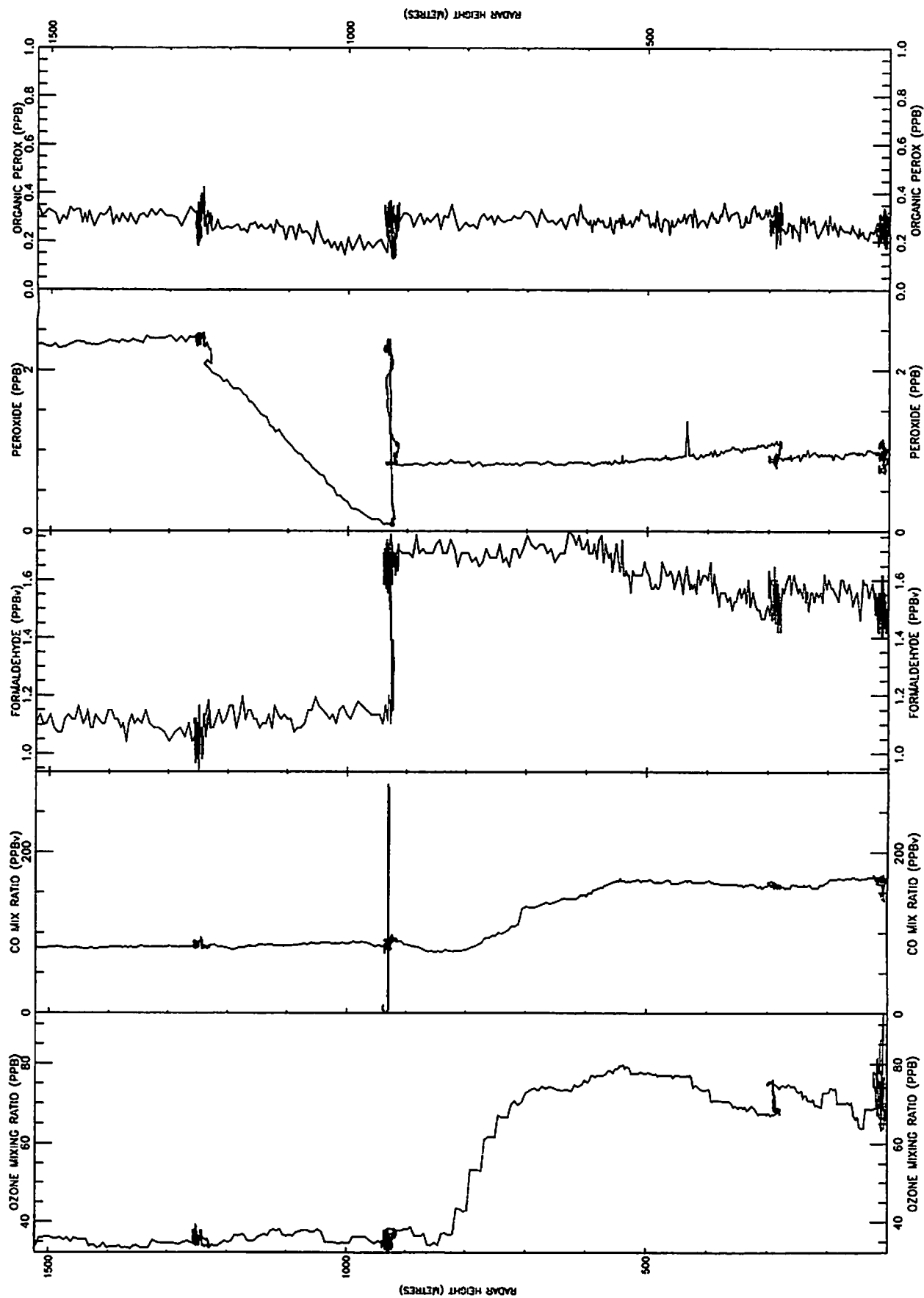
A571 18-AUG-97 P2 350'-5000' From 112540-115344 Plotted 11-Dec-1997 08:50



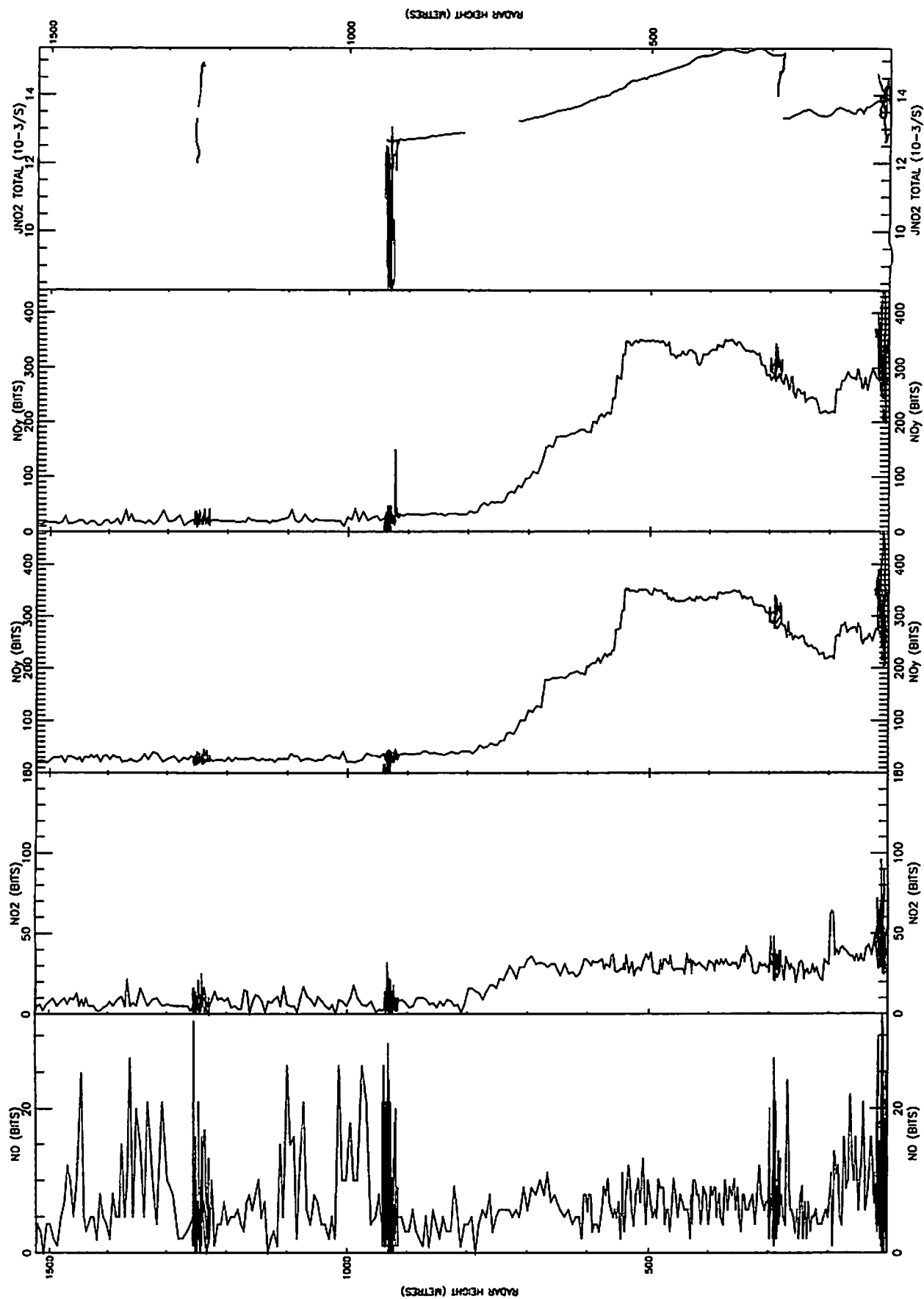
A571 18-AUG-97 P2 350'-5000' From 112540-115344 Plotted 12-Dec-1997 14:03



A571 18-AUG-97 P2 350'-5000' From 112540-115344 Plotted 11-Dec-1997 08:50

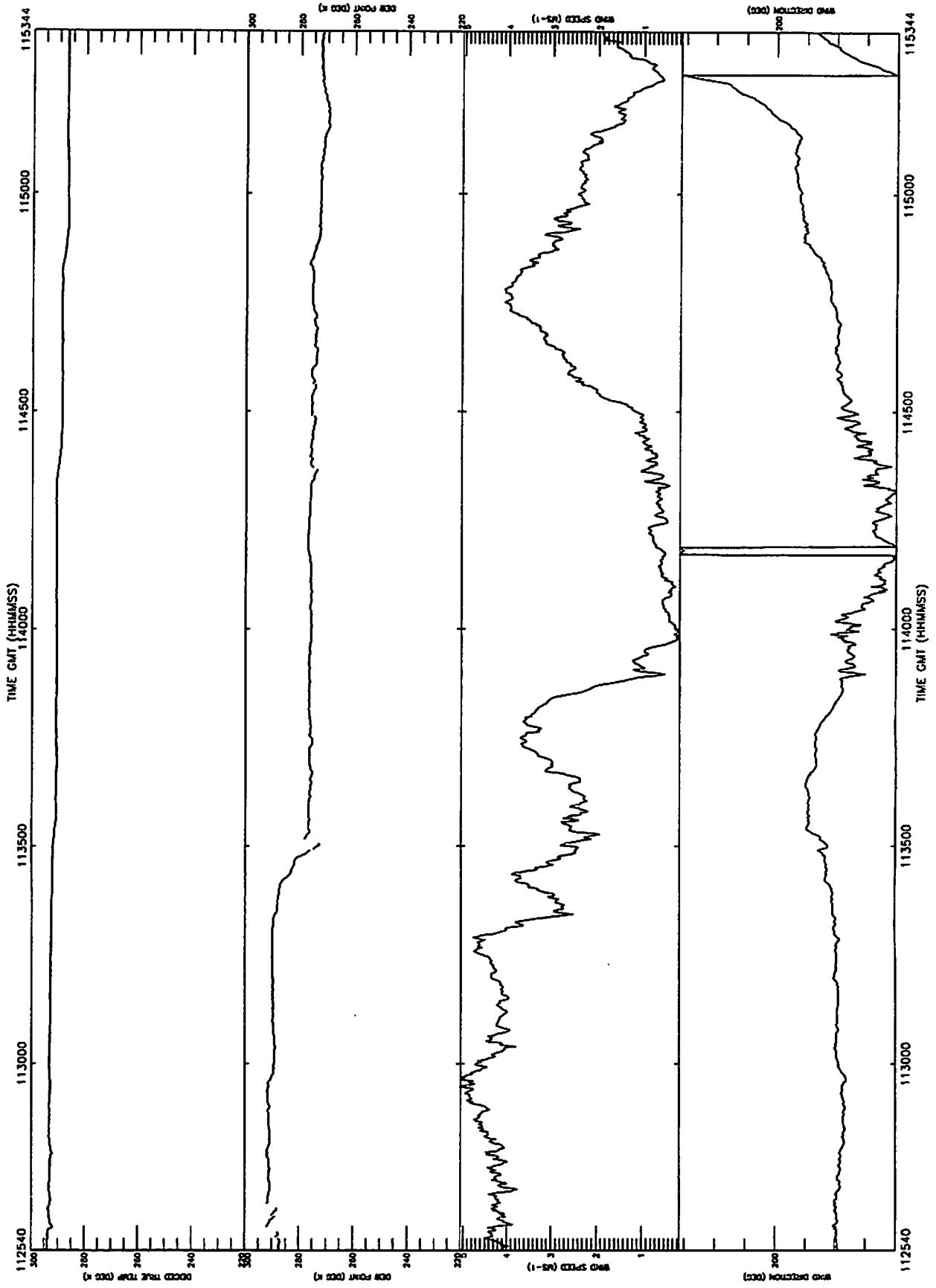


A571 18-AUG-97 P2 350'-5000' From 112540-115344 Plotted 11-Dec-1997 14:24

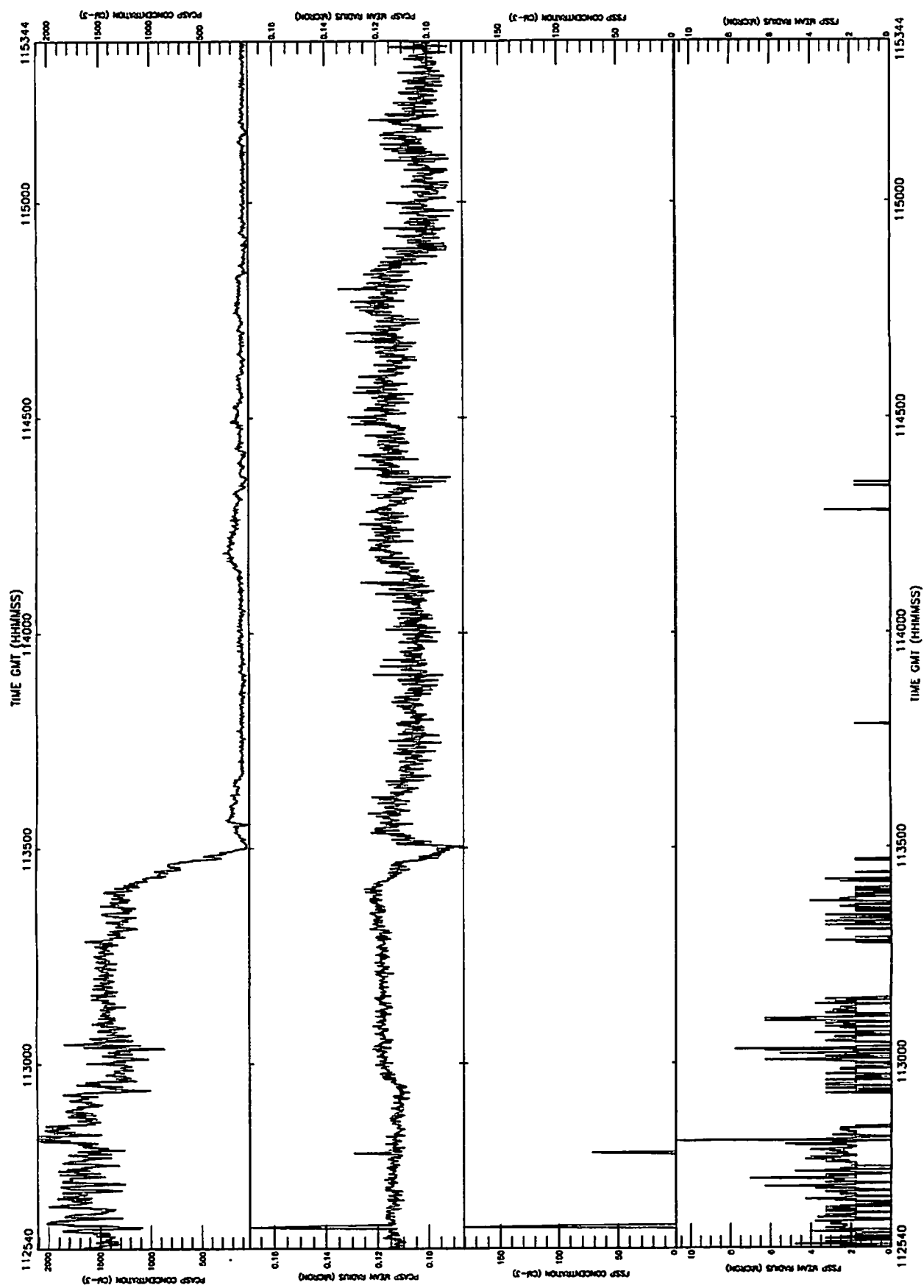




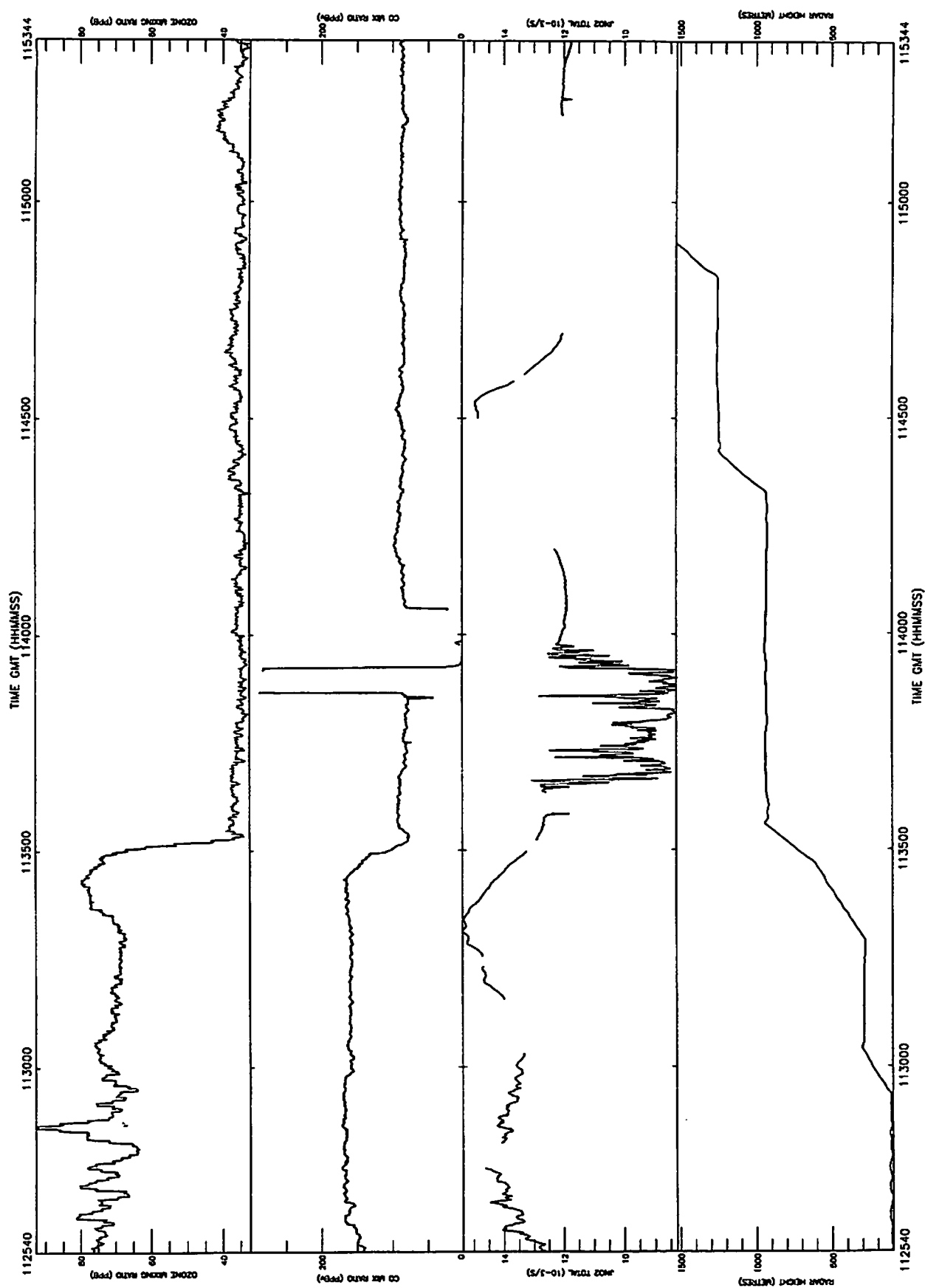
A571 18-AUG-97 P2 350'-5000' From 112540-115344 Plotted 11-Dec-1997 08:50



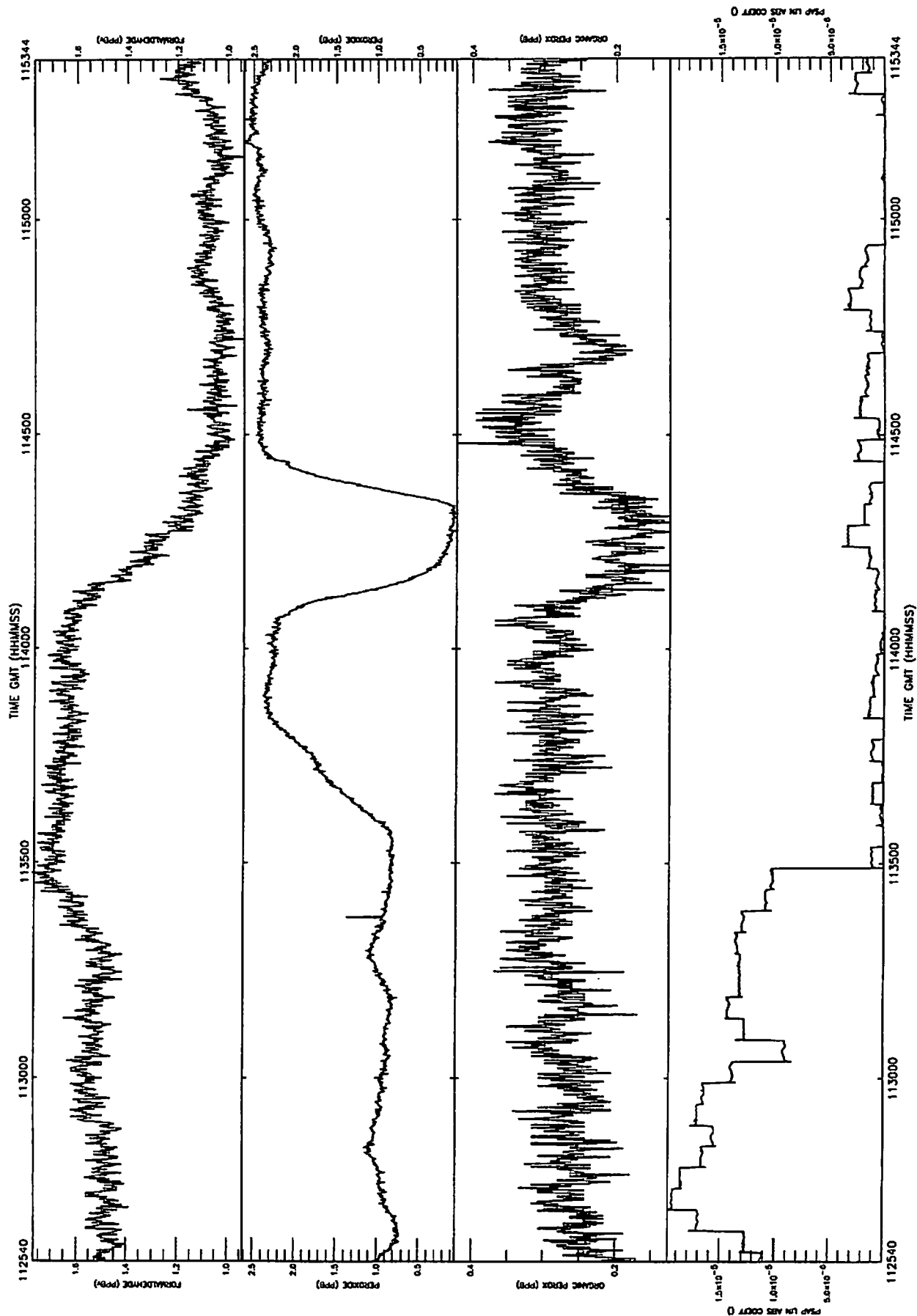
A571 18-AUG-97 P2 350'-5000' From 112540-115344 Plotted 12-Dec-1997 14:03



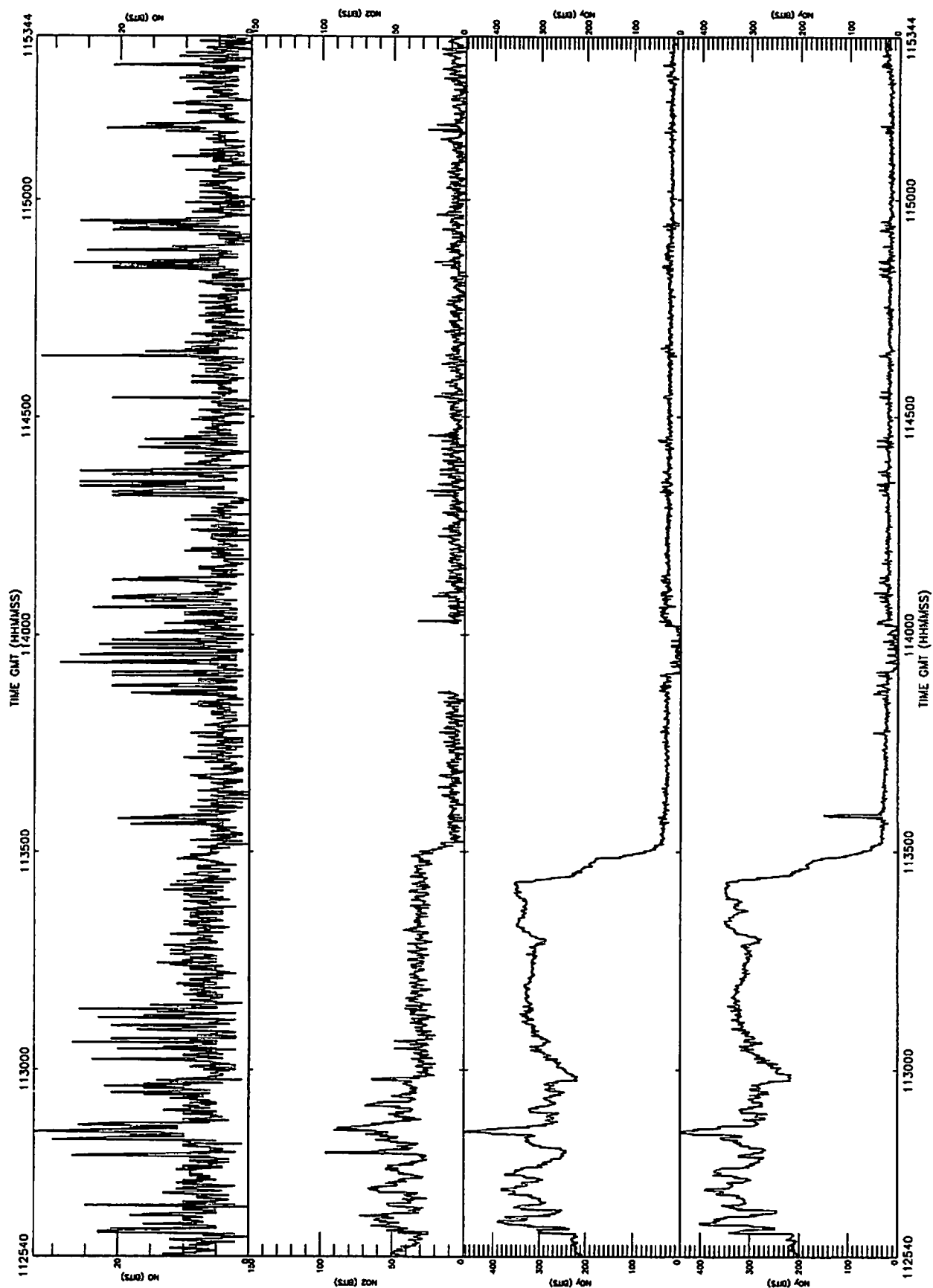
A571 18-AUG-97 P2 350'-5000' From 112540-115344 Plotted 11-Dec-1997 08:50



A571 18-AUG-97 P2 350'-5000' From 112540-115344 Plotted 11-Dec-1997 08:51



A571 18-AUG-97 P2 350'-5000' From 112540-115344 Plotted 11-Dec-1997 14:24



A571 18-AUG-97 P2 350'-5000' From 112540-115344 Plotted 12-Dec-1997 14:03

STATIC PRESSURE (MB)

No of obs 1685  
Mean 926.370  
Standard dev 53.2469  
Max value 1010.92  
Min value 851.966

DEICED TRUE TEMP (DEG K)

No of obs 1685  
Mean 290.525  
Standard dev 2.18739  
Max value 294.065  
Min value 286.645

DEW POINT (DEG K)

No of obs 1685  
Mean 279.515  
Standard dev 7.22936  
Max value 292.133  
Min value 269.405

OZONE MIXING RATIO (PPB)

No of obs 1685  
Mean 48.1627  
Standard dev 17.5921  
Max value 92.7402  
Min value 32.3334

PCASP CONCENTRATION (CM-3)

No of obs 1685  
Mean 551.337  
Standard dev 644.878  
Max value 2111.66  
Min value 36.0152

FSSP CONCENTRATION (CM-3)

No of obs 1685  
Mean 0.379451  
Standard dev 6.65335  
Max value 180.473  
Min value 0.000000

RADAR HEIGHT (METRES)

No of obs 1685  
Mean 885.302  
Standard dev 487.154  
Max value 1522.15  
Min value 101.123

CORRECTED LATITUDE (DEGREES)

No of obs 1685  
Mean 53.0351  
Standard dev 8.993831e-02  
Max value 53.1696  
Min value 52.8362

CORRECTED LONGITUDE (DEGREES)

No of obs 1685  
Mean 3.37412  
Standard dev 0.236123  
Max value 3.82296  
Min value 2.91770

NORTHWARD WIND COMPT (M S-1)

No of obs 1685  
Mean 0.634004  
Standard dev 0.984894  
Max value 2.85158  
Min value -0.853027

EASTWARD WIND COMPT (M S-1)

No of obs 1685  
Mean -2.20381  
Standard dev 1.66889  
Max value 1.22388  
Min value -5.05322

VERTICAL WIND COMPT (M S-1)

No of obs 1685  
Mean -3.323244e-02  
Standard dev 0.350795  
Max value 0.687050  
Min value -1.36459

WIND SPEED (MS-1)

No of obs 1685  
Mean 2.64806  
Standard dev 1.41445  
Max value 5.05662  
Min value 0.163421

WIND DIRECTION (DEG)

Mean 106.050

TRUE AIR SPEED (M S-1)

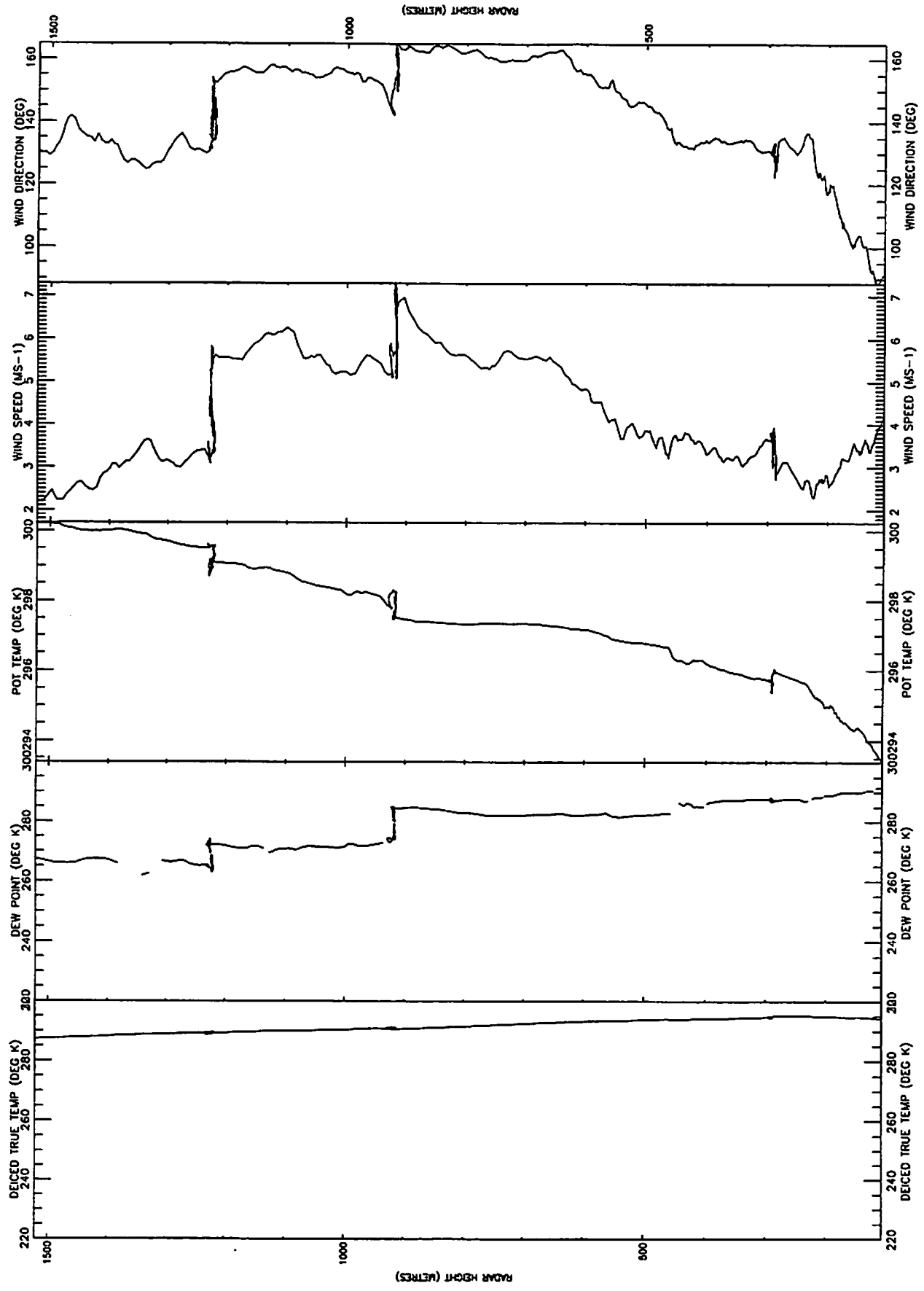
No of obs 1685  
Mean 97.0114  
Standard dev 4.18398  
Max value 106.284  
Min value 90.0117

HEADING (DEG)

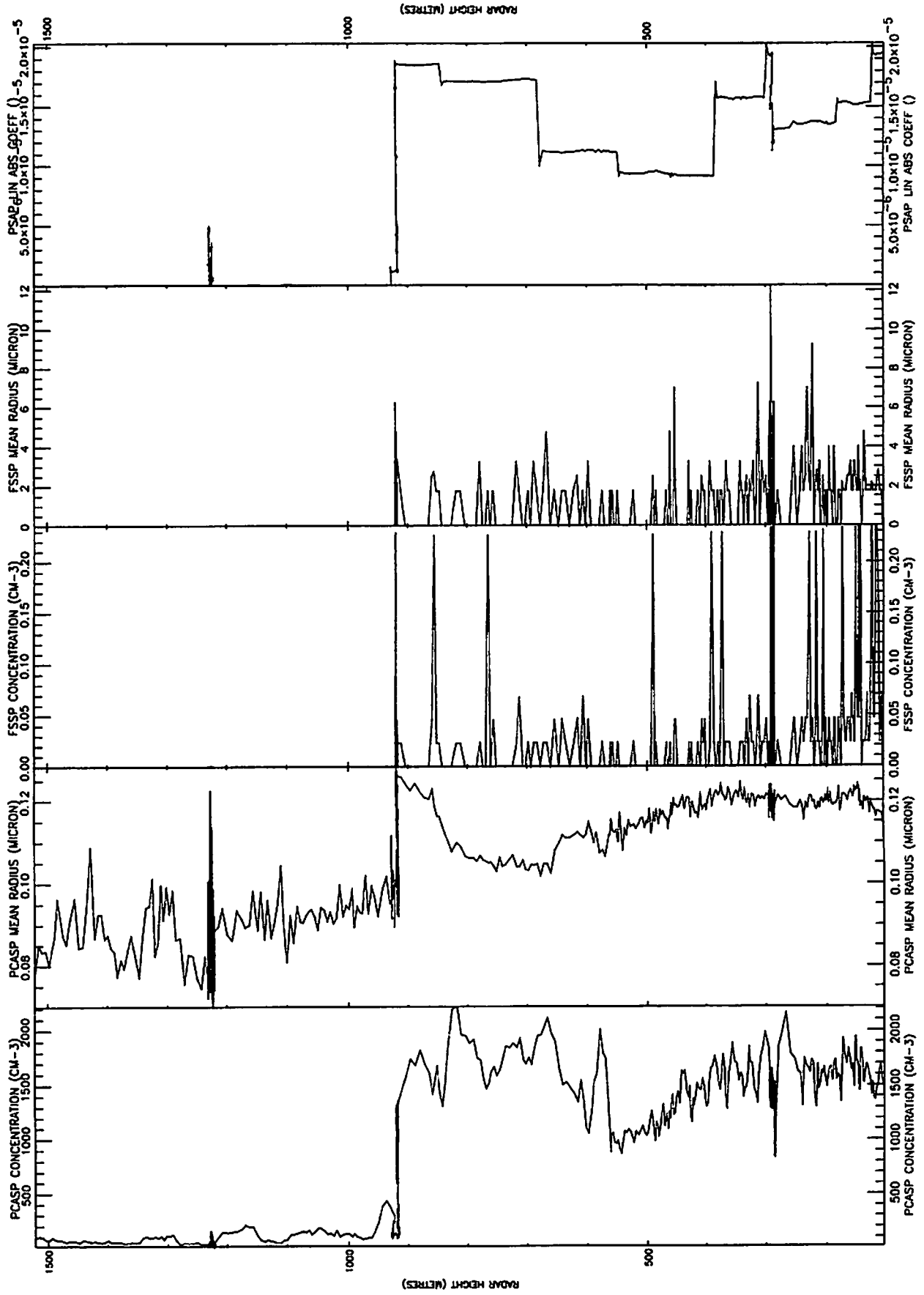
Mean 38.1531



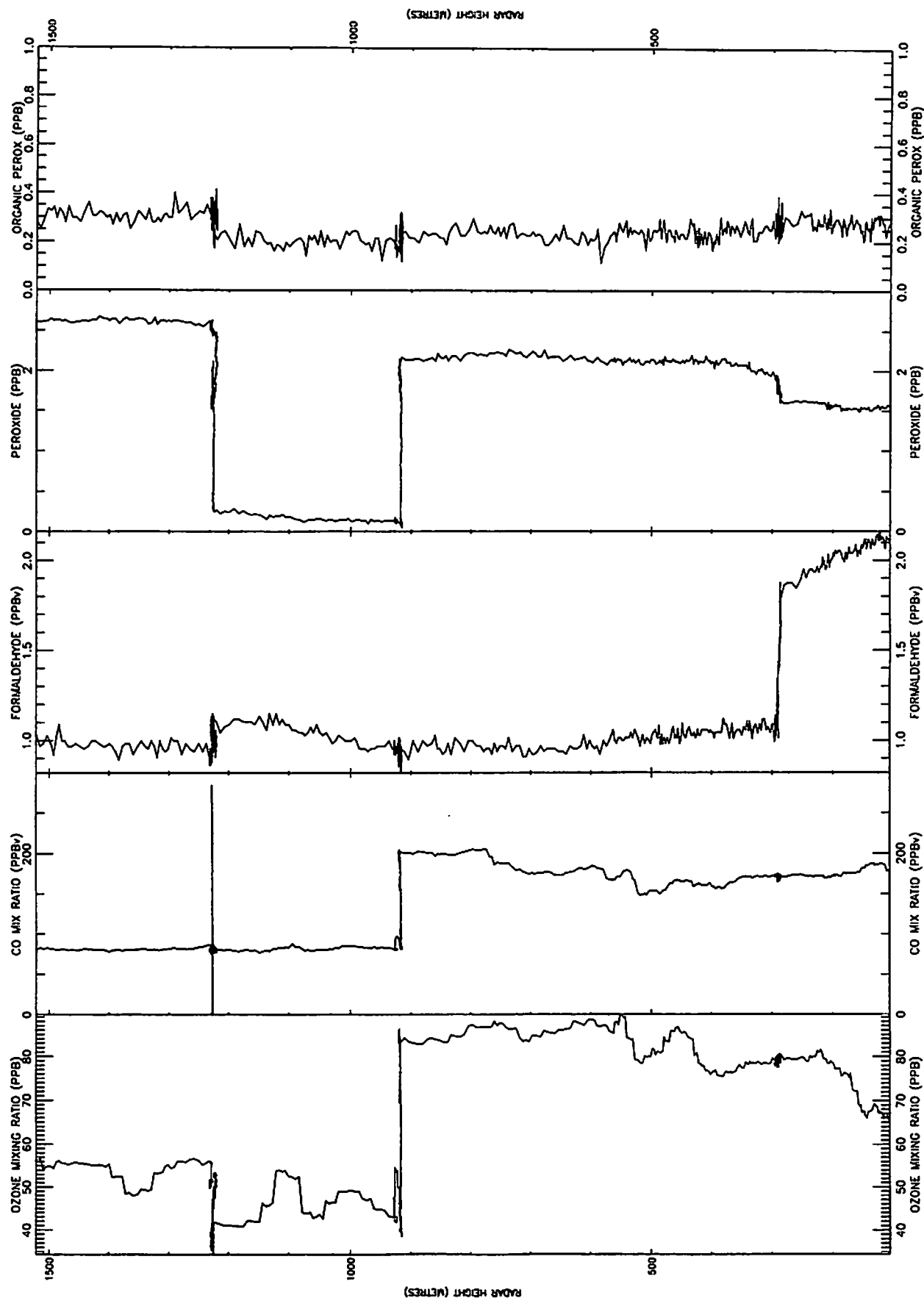
A571 18-AUG-97 P3 5000'-400' From 115759-121633 Plotted 11-Dec-1997 08:55



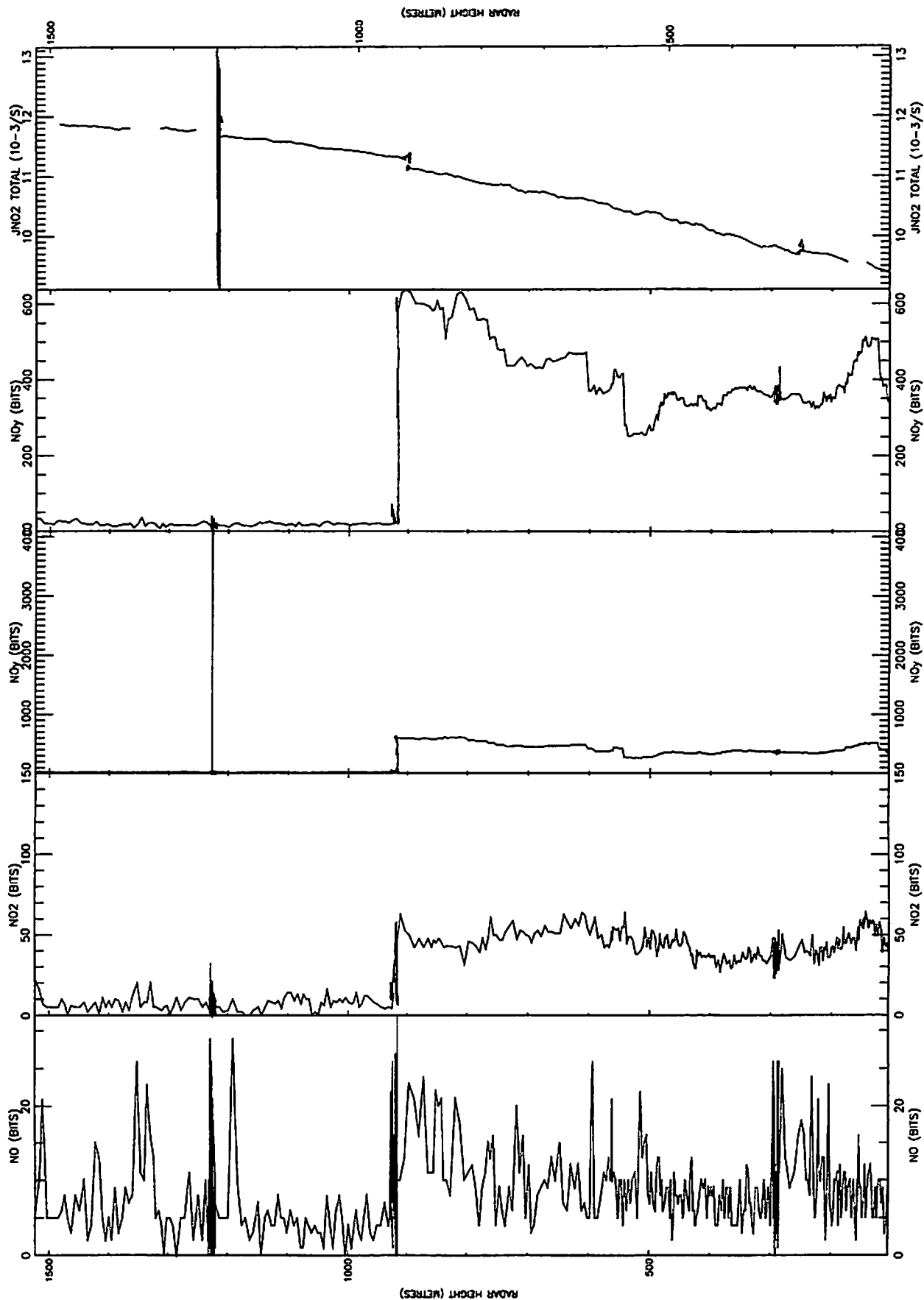
A571 18-AUG-97 P3 5000'-400' From 115759-121633 Plotted 12-Dec-1997 14:09



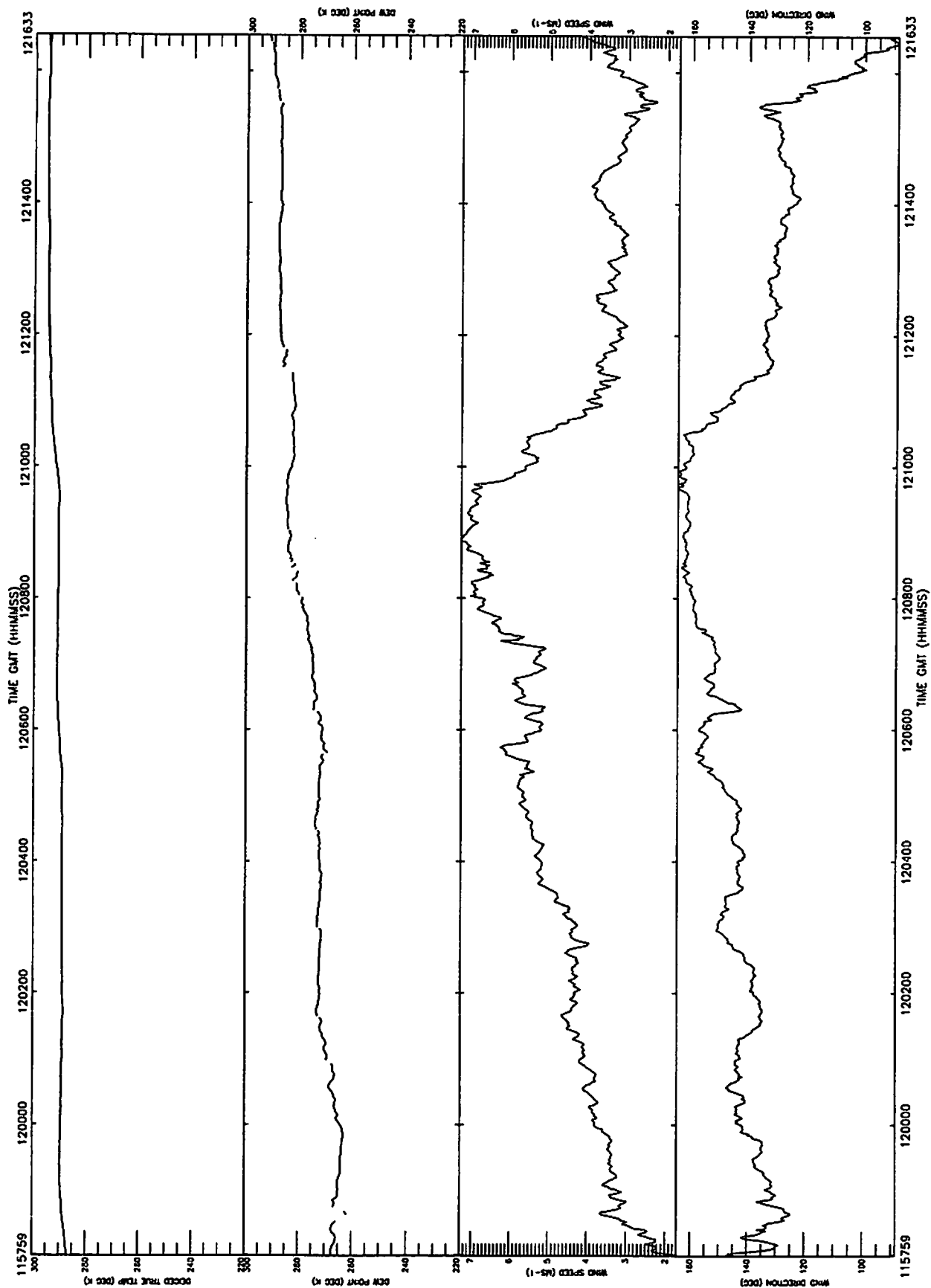
A571 18-AUG-97 P3 5000'-400' From 115759-121633 Plotted 11-Dec-1997 08:56



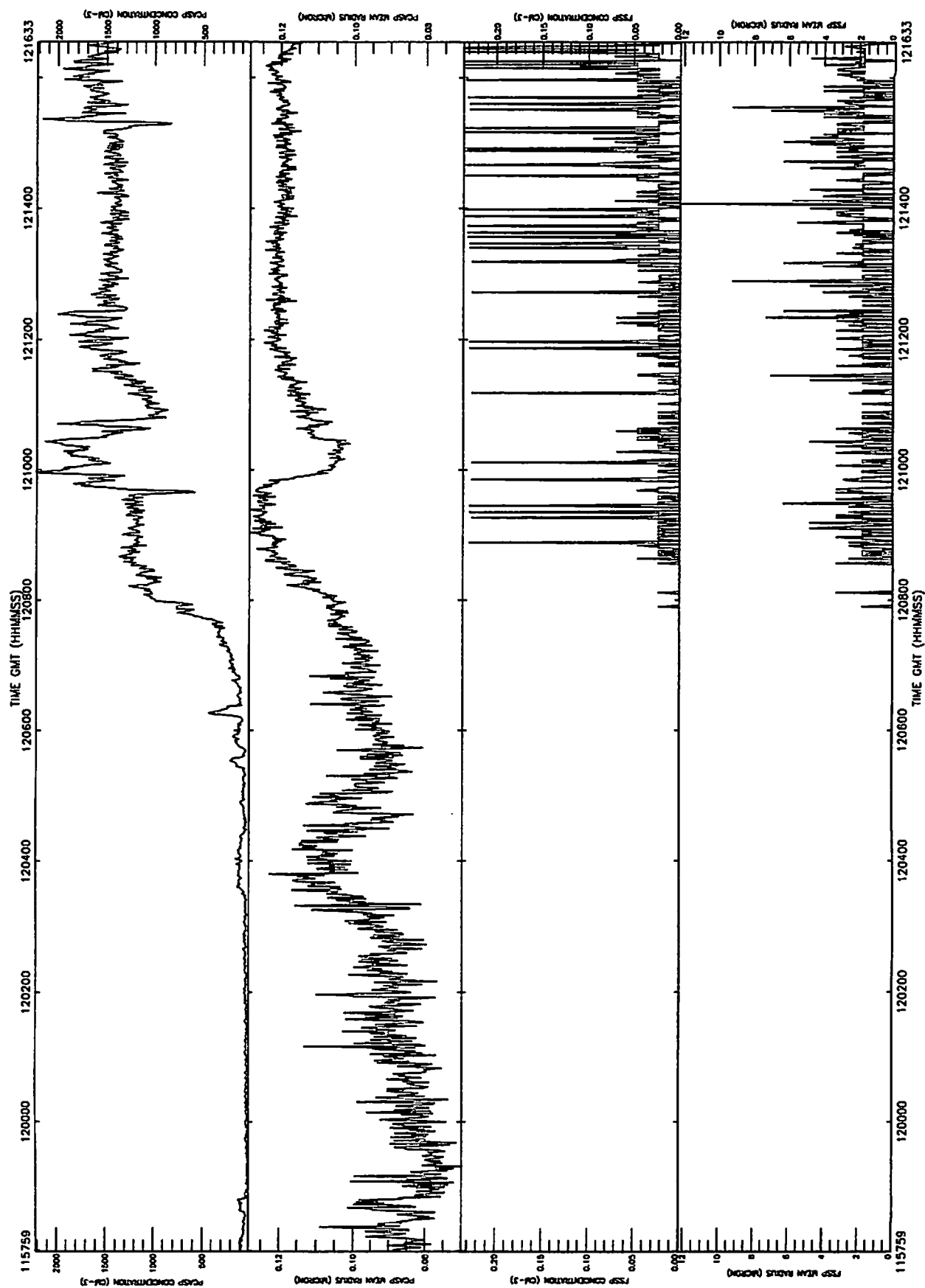
A571 18-AUG-97 P3 5000'-400' From 115759-121633 Plotted 11-Dec-1997 14:30



A571 18-AUG-97 P3 5000'-400' From 115759-121633 Plotted 11-Dec-1997 08:56

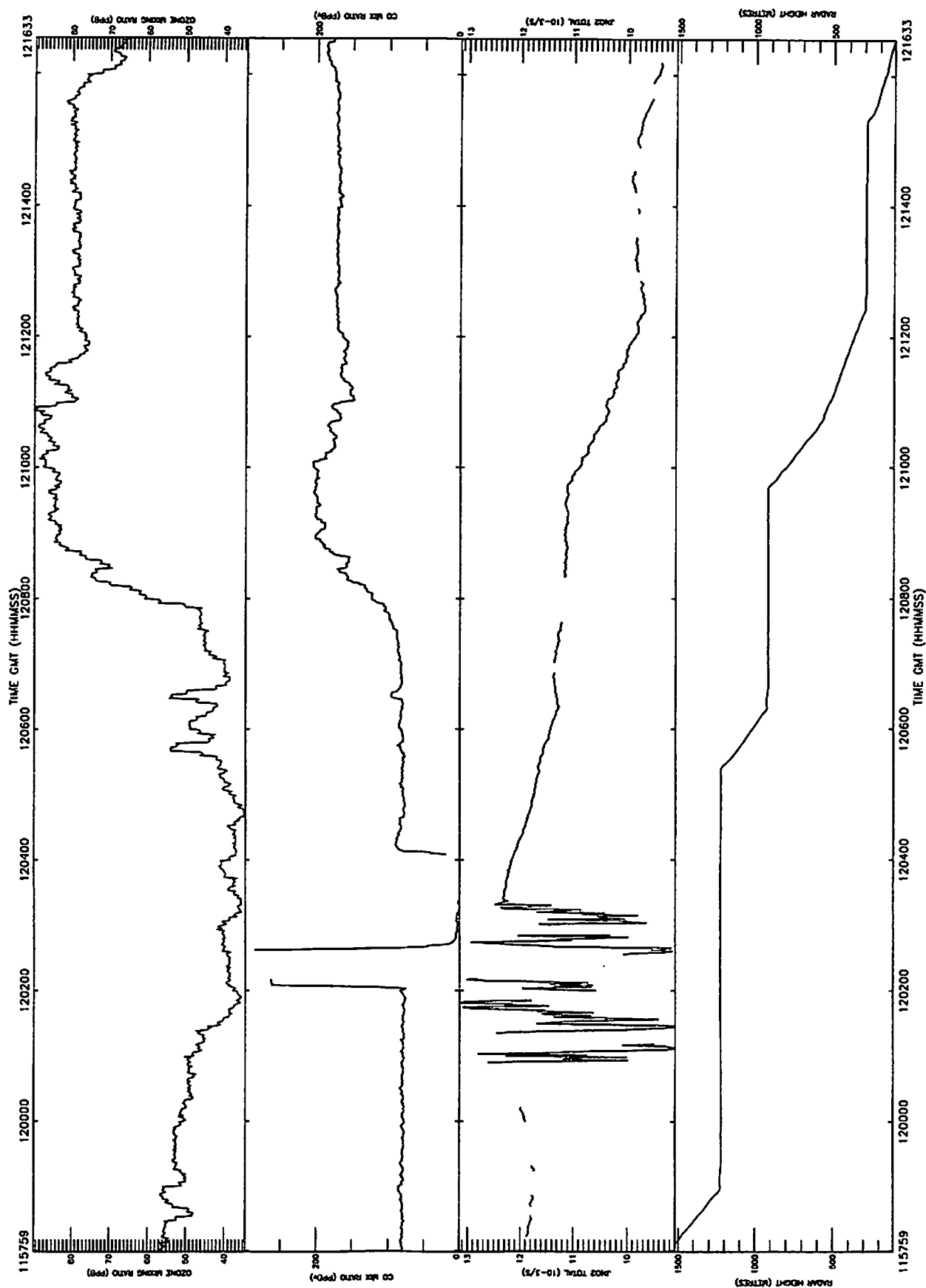


A571 18-AUG-97 P3 5000'-400' From 115759-121633 Plotted 12-Dec-1997 14:09

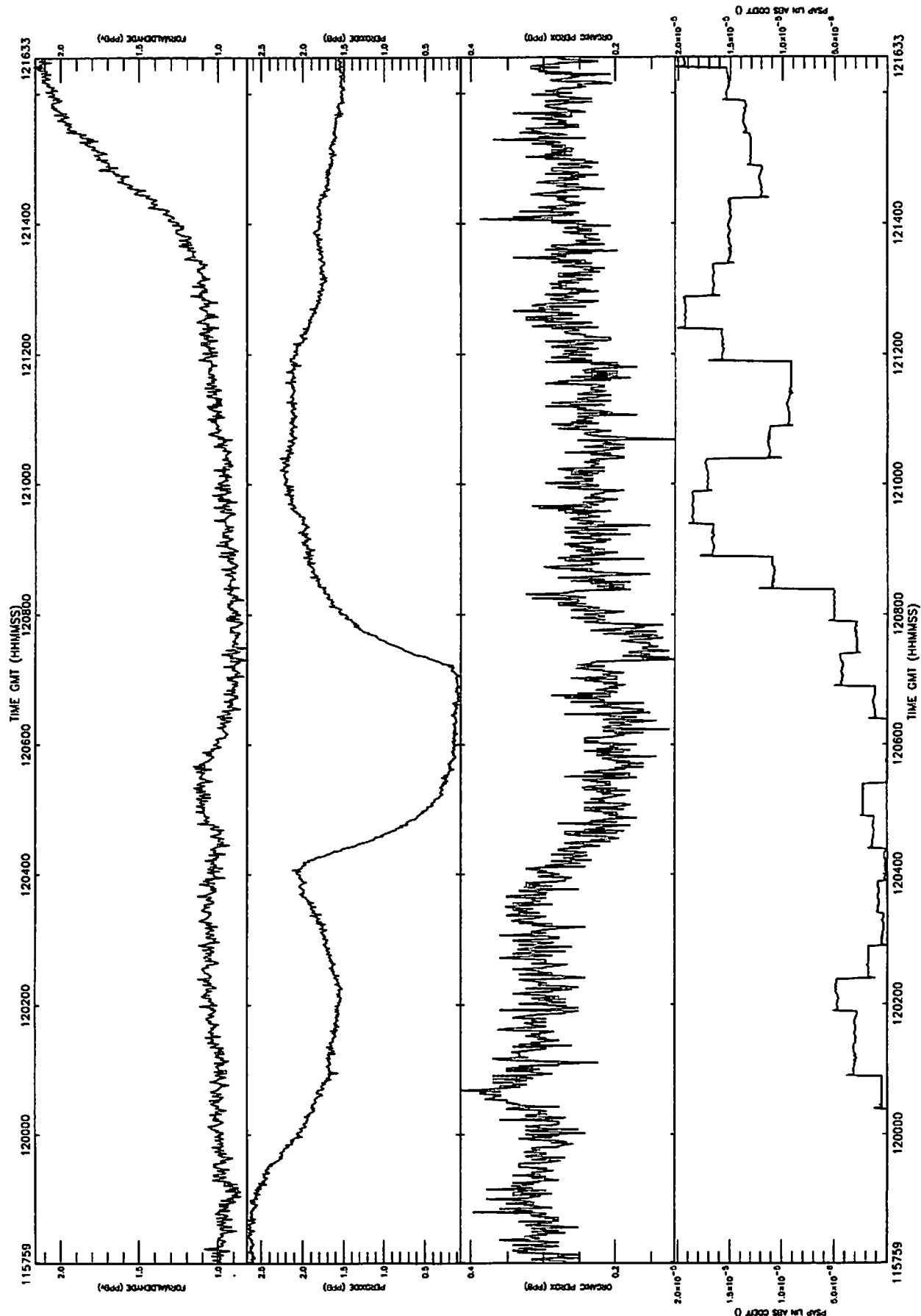




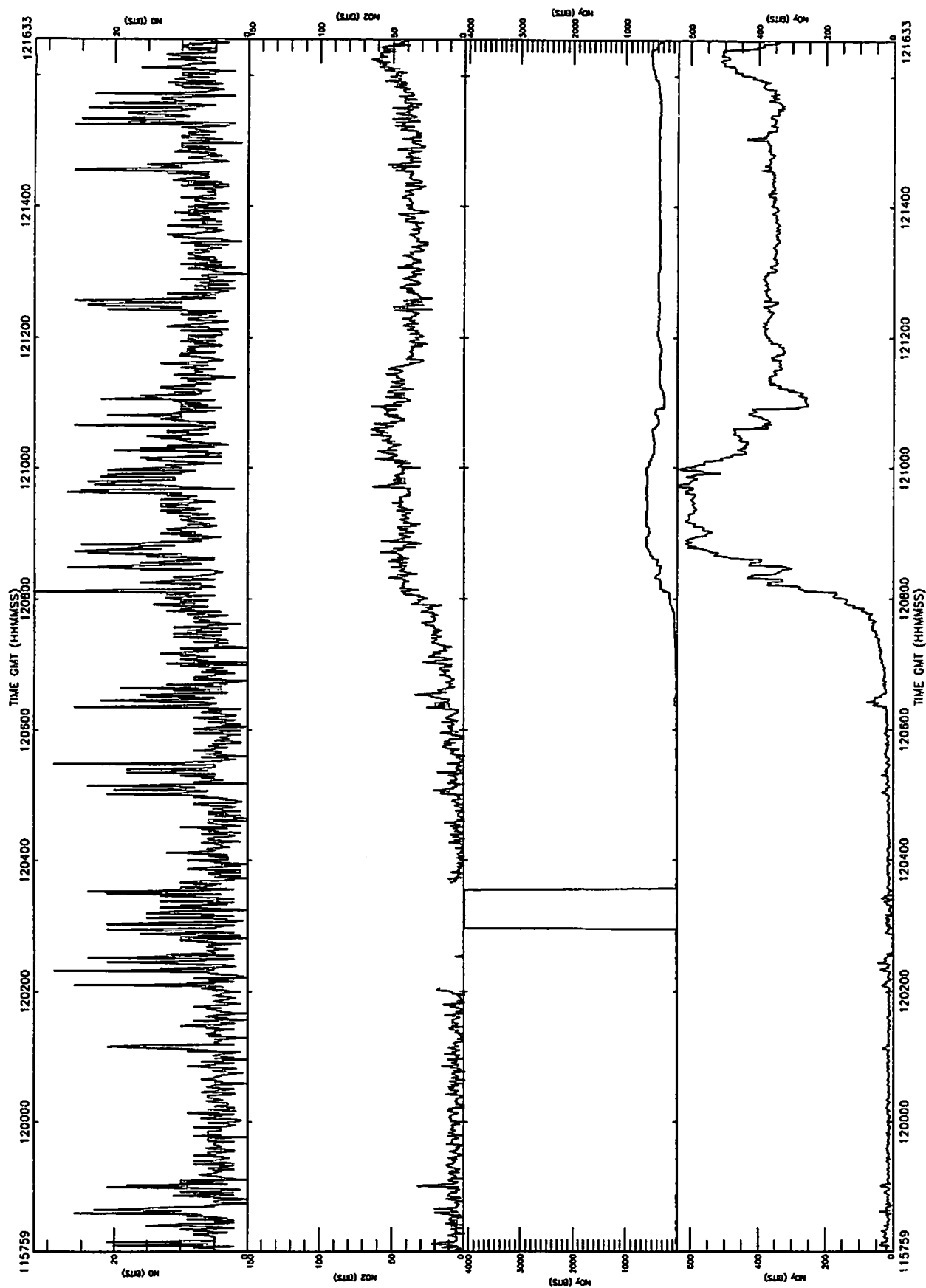
A571 18-AUG-97 P3 5000'-400' From 115759-121633 Plotted 11-Dec-1997 08:56



A571 18-AUG-97 P3 5000'-400' From 115759-121633 Plotted 11-Dec-1997 08:56



A571 18-AUG-97 P3 5000'-400' From 115759-121633 Plotted 11-Dec-1997 14:30



A571 18-AUG-97 P3 5000'-400' From 115759-121633 Plotted 12-Dec-1997 14:09

STATIC PRESSURE (MB)

No of obs 1115  
Mean 927.752  
Standard dev 44.2715  
Max value 1010.18  
Min value 853.722

DEICED TRUE TEMP (DEG K)

No of obs 1115  
Mean 291.333  
Standard dev 2.44817  
Max value 295.275  
Min value 286.981

DEW POINT (DEG K)

No of obs 1115  
Mean 277.682  
Standard dev 8.23712  
Max value 291.755  
Min value 261.947

OZONE MIXING RATIO (PPB)

No of obs 1115  
Mean 60.5759  
Standard dev 18.2925  
Max value 89.5803  
Min value 34.4561

PCASP CONCENTRATION (CM-3)

No of obs 1115  
Mean 708.992  
Standard dev 681.750  
Max value 2217.12  
Min value 17.0028

FSSP CONCENTRATION (CM-3)

No of obs 1115  
Mean 1.432007e-02  
Standard dev 4.163528e-02  
Max value 0.235637  
Min value 0.000000

RADAR HEIGHT (METRES)

No of obs 1115  
Mean 855.849  
Standard dev 408.611  
Max value 1522.15  
Min value 105.956

CORRECTED LATITUDE (DEGREES)

No of obs 1115  
Mean 53.3969  
Standard dev 0.127307  
Max value 53.6090  
Min value 53.1761

CORRECTED LONGITUDE (DEGREES)

No of obs 1115  
Mean 4.18091  
Standard dev 0.426971  
Max value 4.91127  
Min value 3.43598

NORTHWARD WIND COMPT (M S-1)

No of obs 1115  
Mean 3.56873  
Standard dev 1.62648  
Max value 6.95856  
Min value -0.104645

EASTWARD WIND COMPT (M S-1)

No of obs 1115  
Mean -2.51224  
Standard dev 0.441924  
Max value -0.976784  
Min value -4.14415

VERTICAL WIND COMPT (M S-1)

No of obs 1115  
Mean 0.378182  
Standard dev 0.229270  
Max value 1.02708  
Min value -0.116638

WIND SPEED (MS-1)

No of obs 1115  
Mean 4.49727  
Standard dev 1.28896  
Max value 7.28846  
Min value 1.70607

WIND DIRECTION (DEG)

Mean 144.856

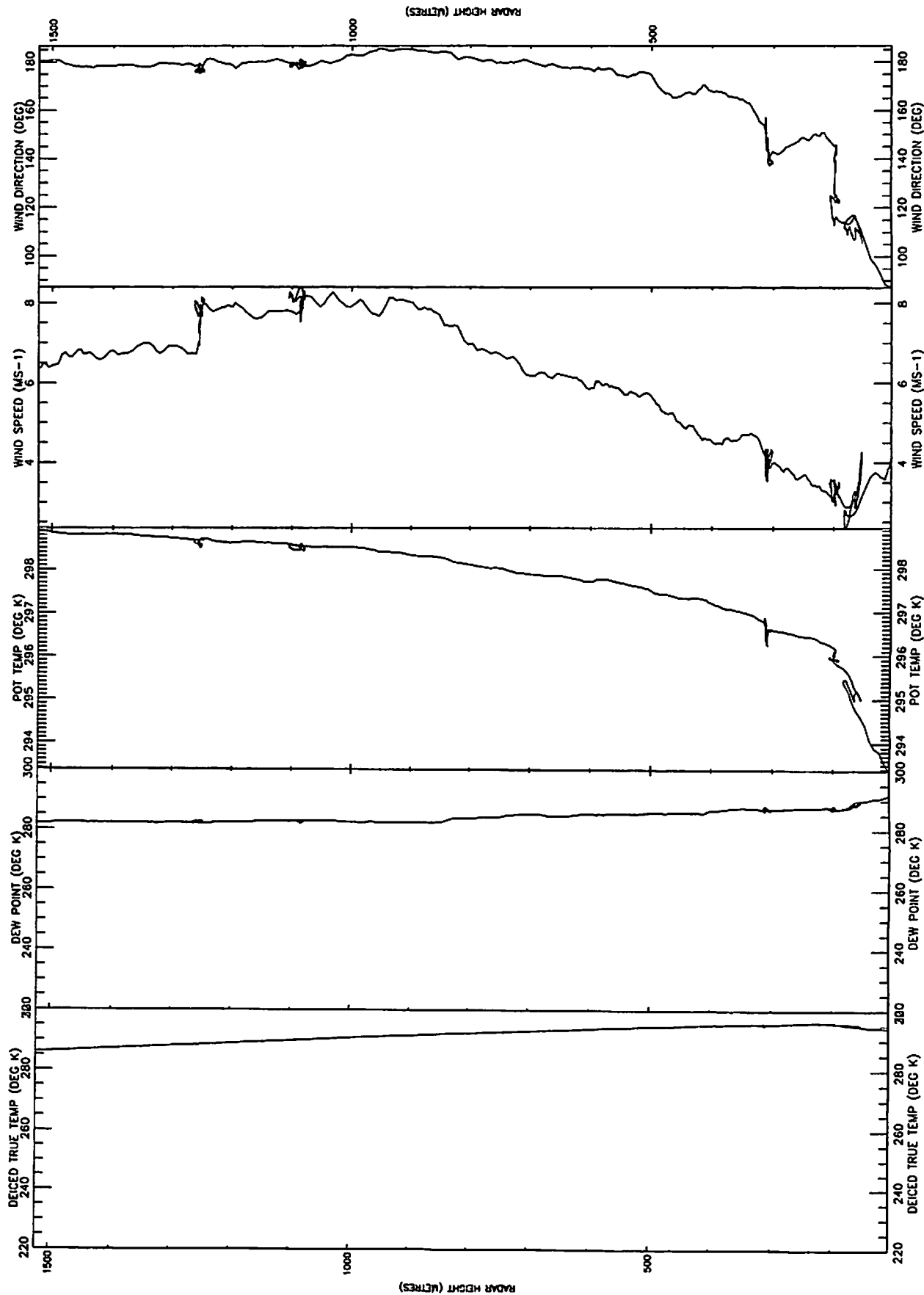
TRUE AIR SPEED (M S-1)

No of obs 1115  
Mean 98.6613  
Standard dev 2.48445  
Max value 103.432  
Min value 92.8892

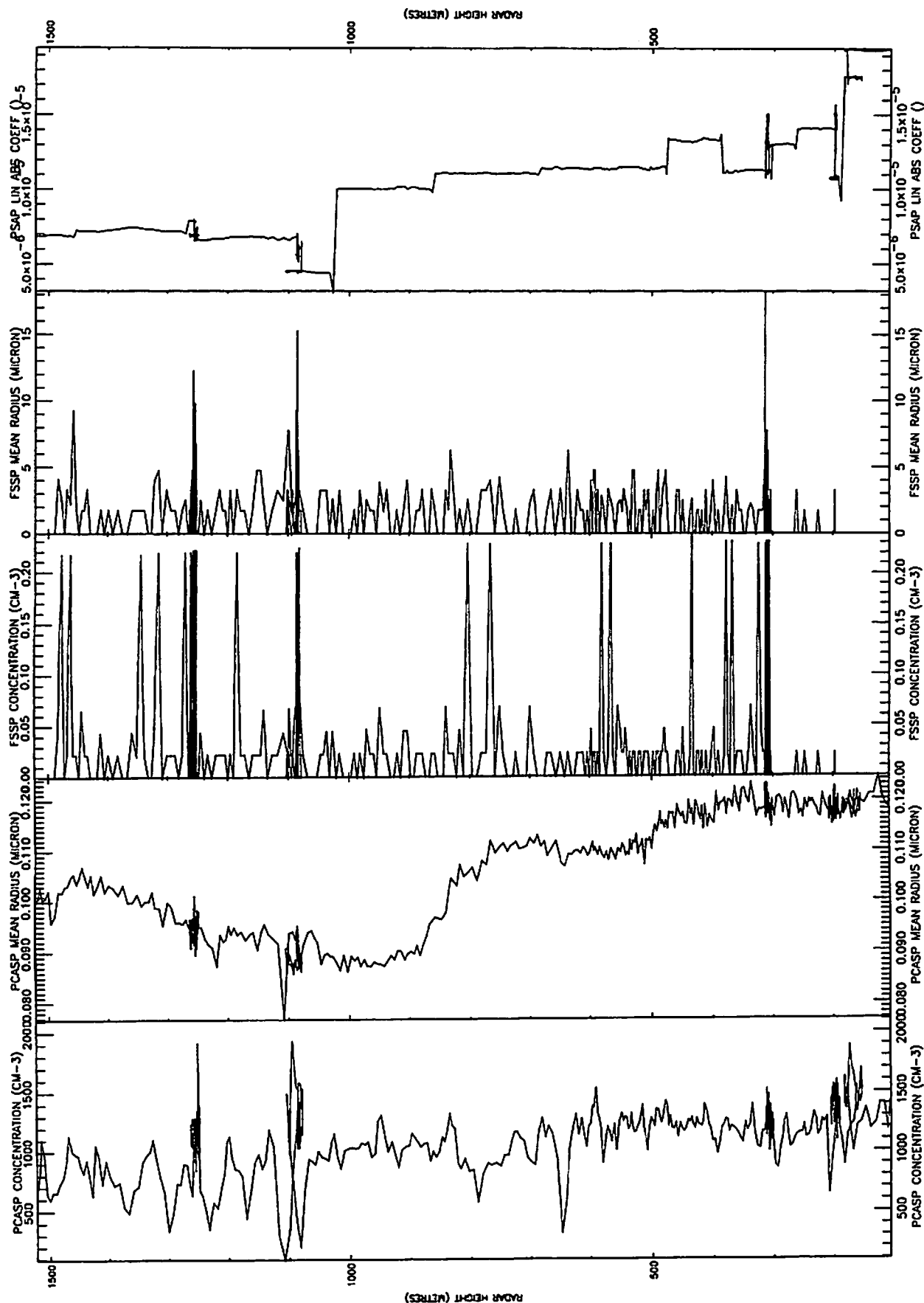
HEADING (DEG)

Mean 63.8583

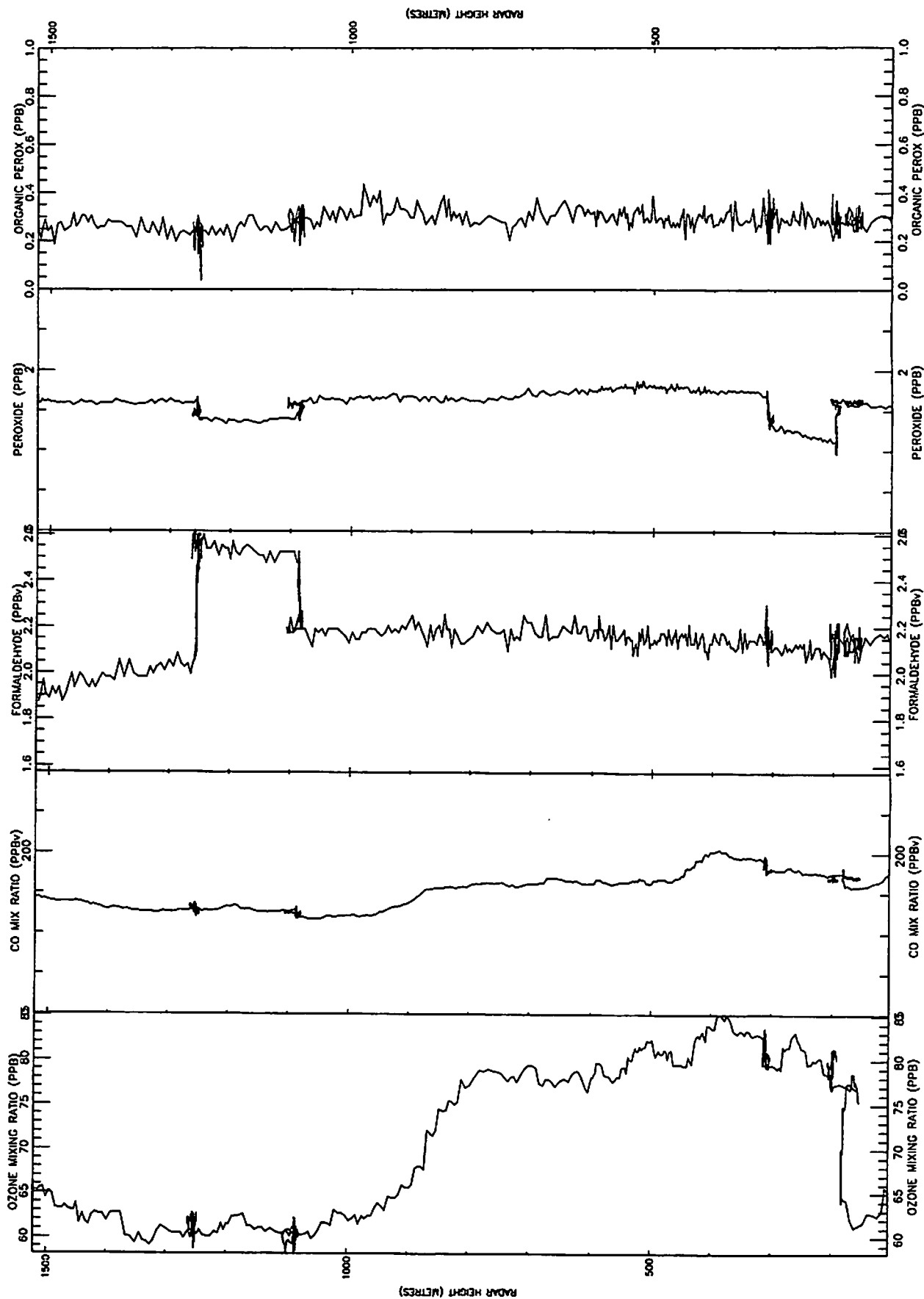
A571 18-AUG-97 P4 400'-5000' From 121633-123850 Plotted 11-Dec-1997 09:02



A571 18-AUG-97 P4 400'-5000' From 121633-123850 Plotted 12-Dec-1997 14:16

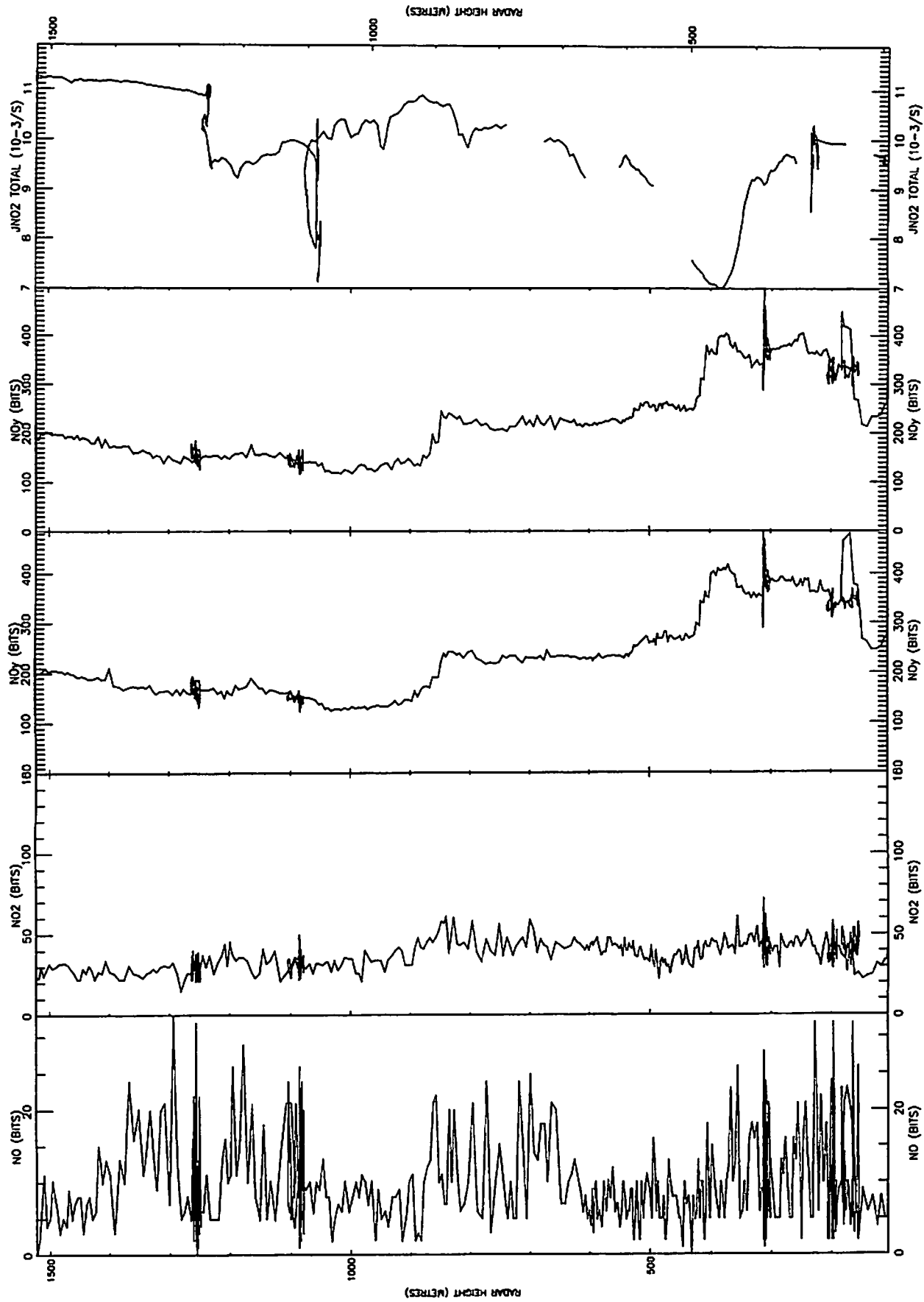


A571 18-AUG-97 P4 400'-5000' From 121633-123850 Plotted 11-Dec-1997 09:02

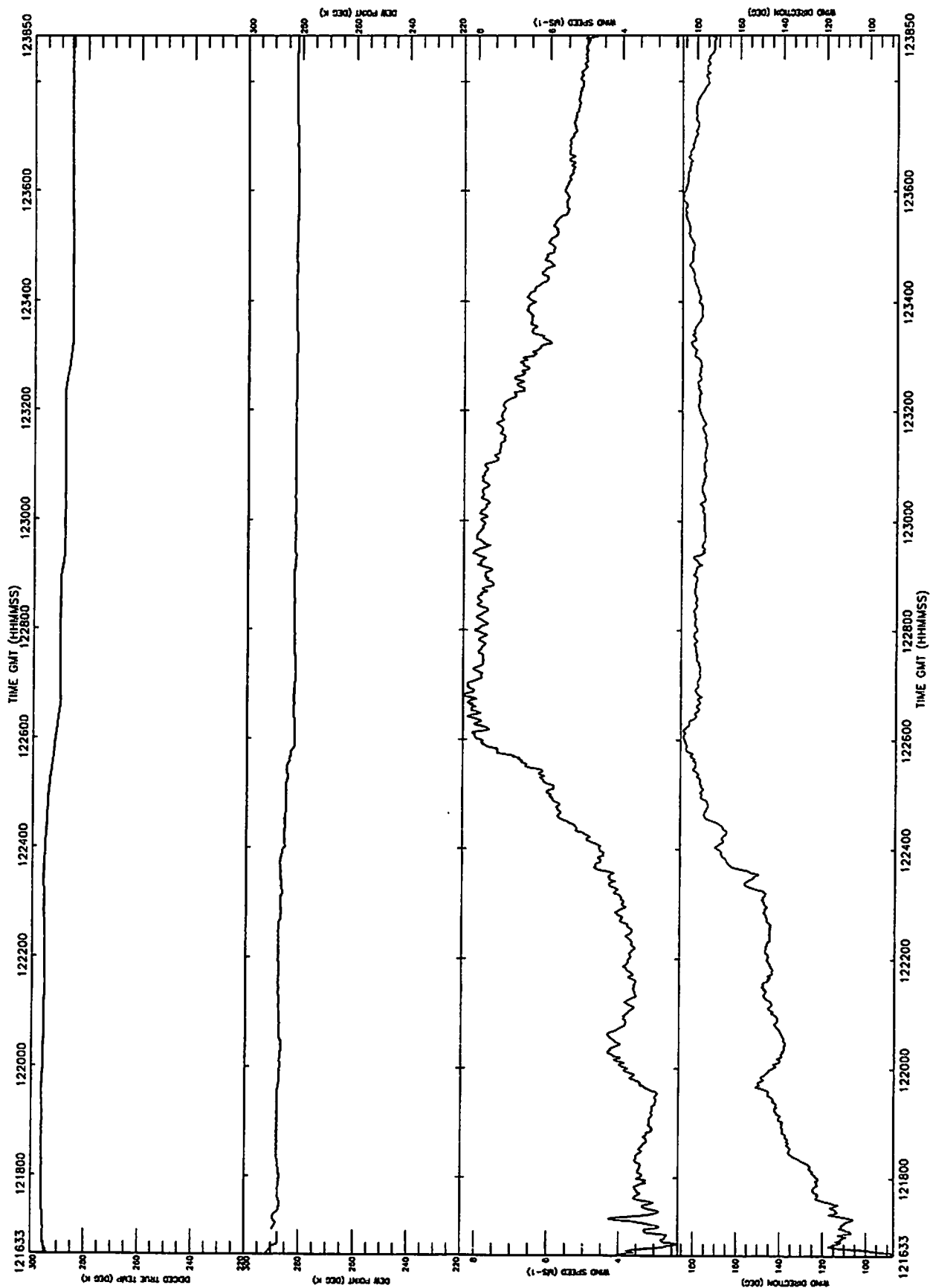




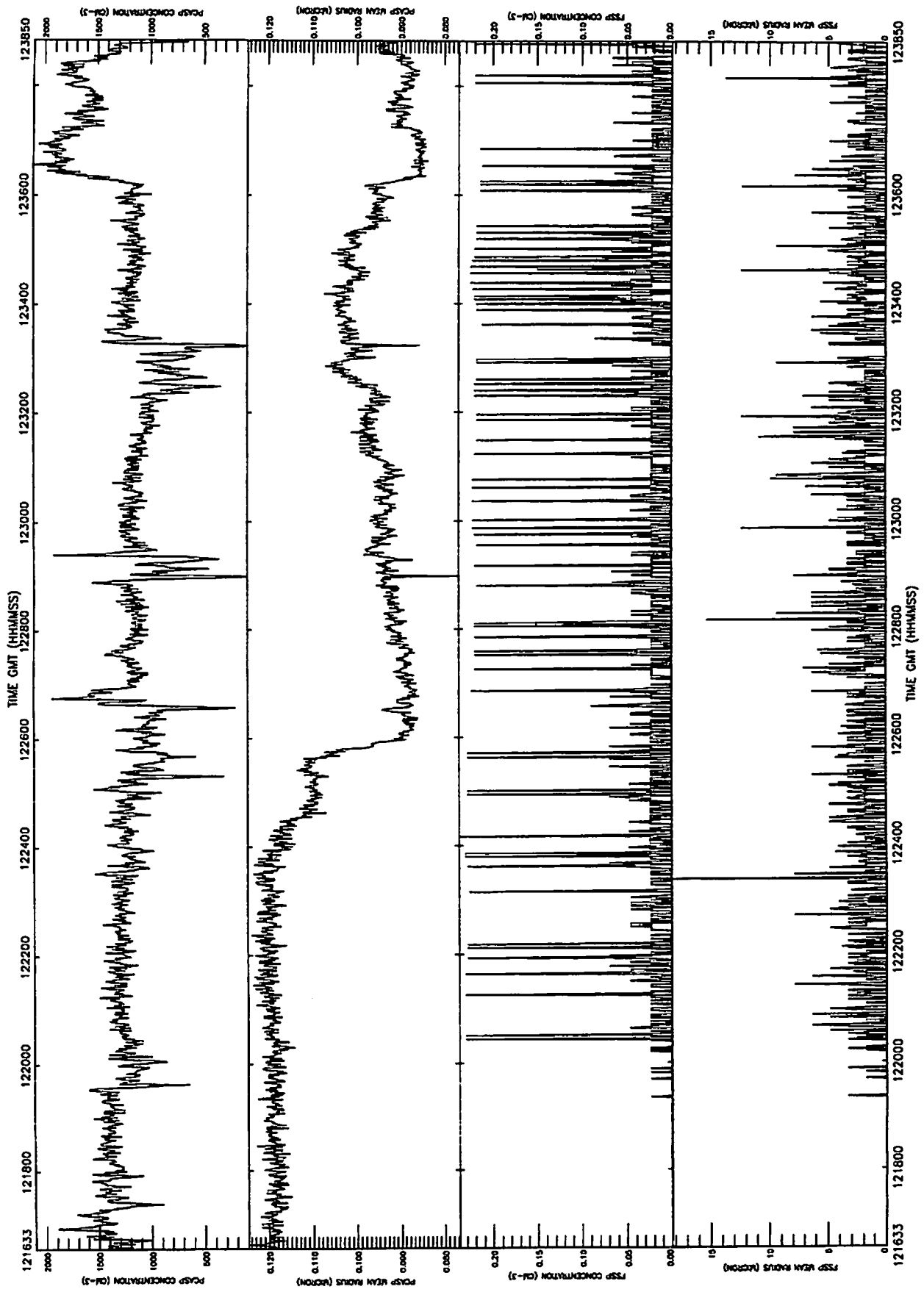
A571 18-AUG-97 P4 400'-5000' From 121633-123850 Plotted 11-Dec-1997 14:37



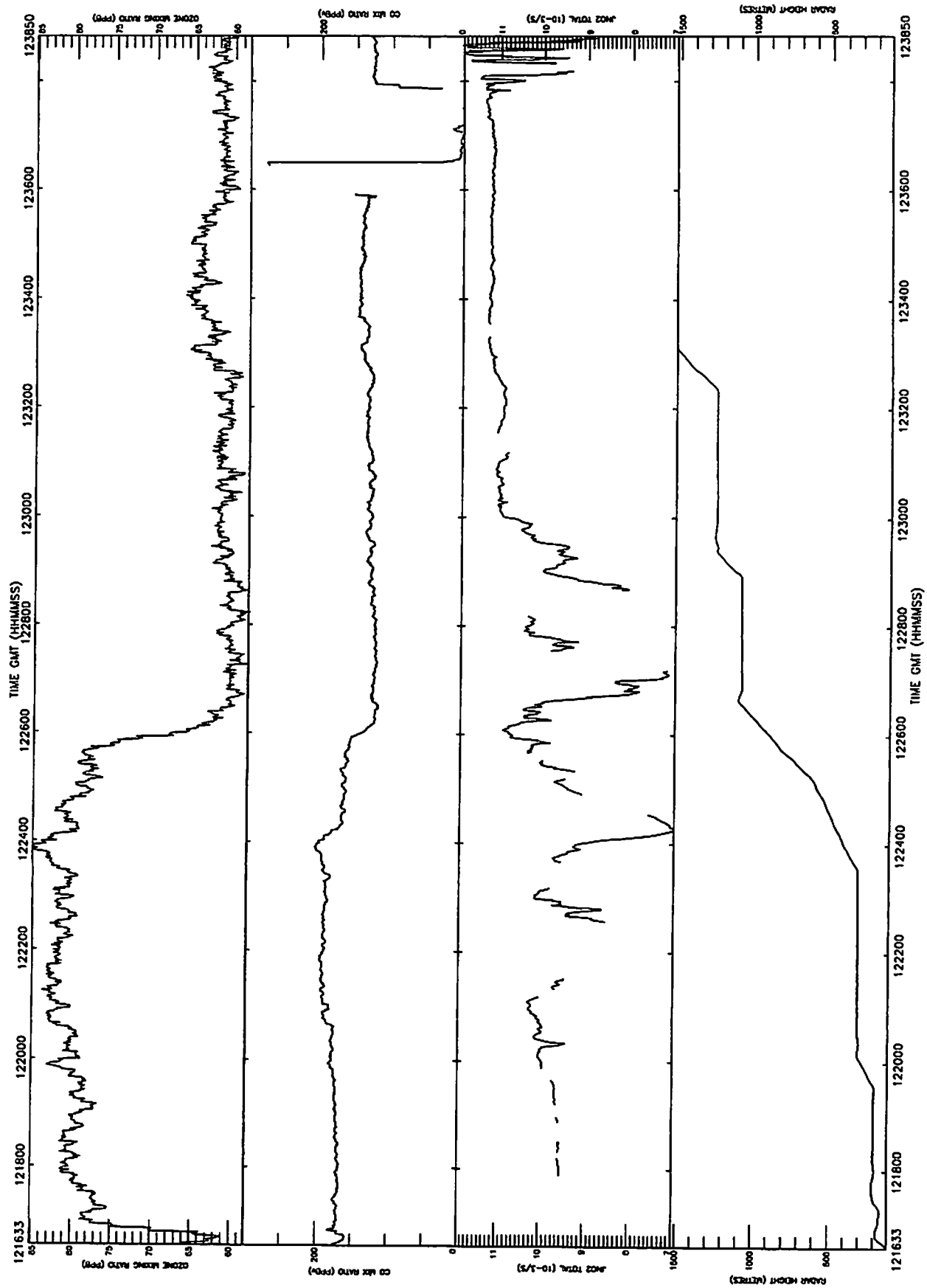
A571 18-AUG-97 P4 400'-5000' From 121633-123850 Plotted 11-Dec-1997 09:03



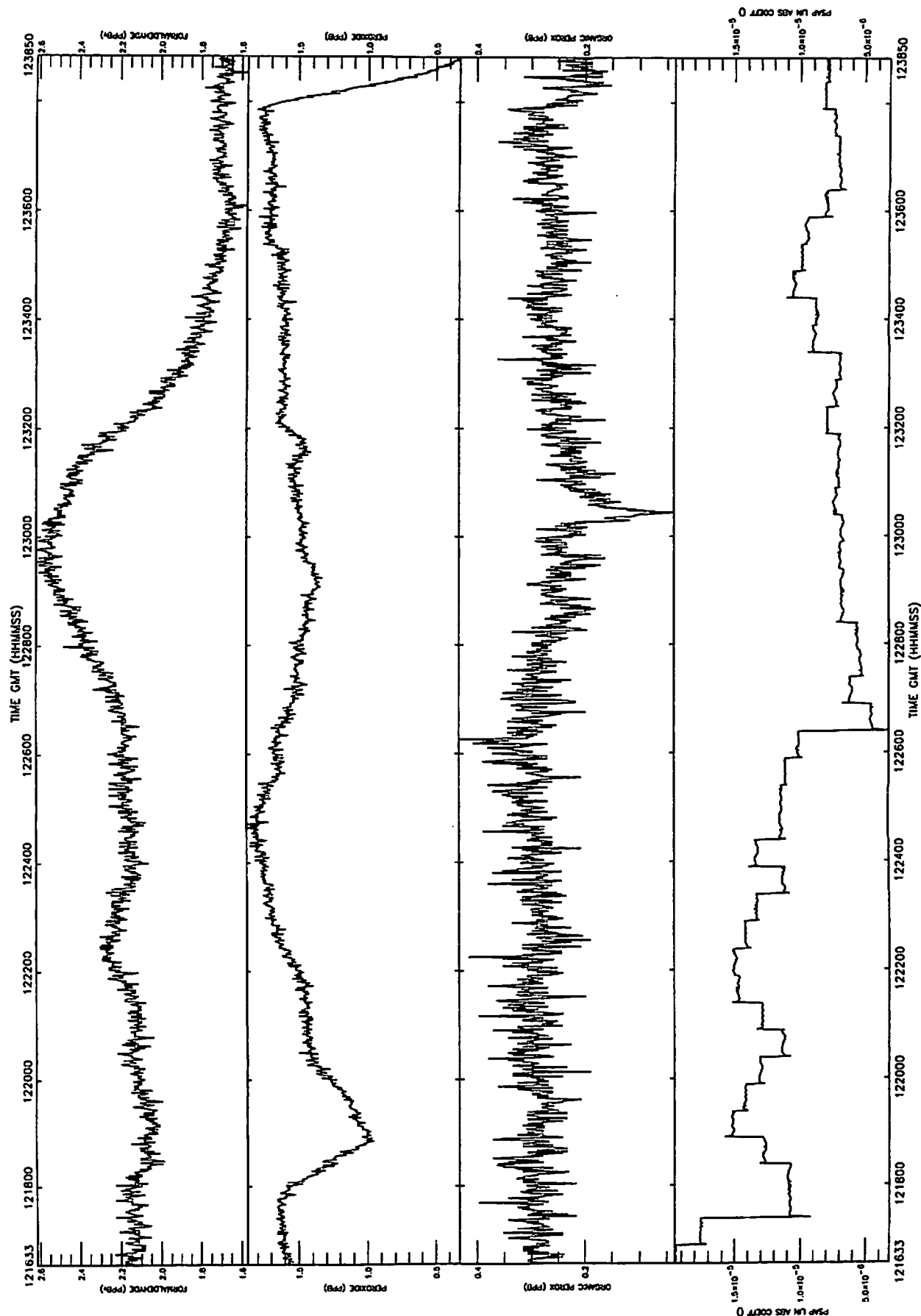
A571 18-AUG-97 P4 400'-5000' From 121633-123850 Plotted 12-Dec-1997 14:16



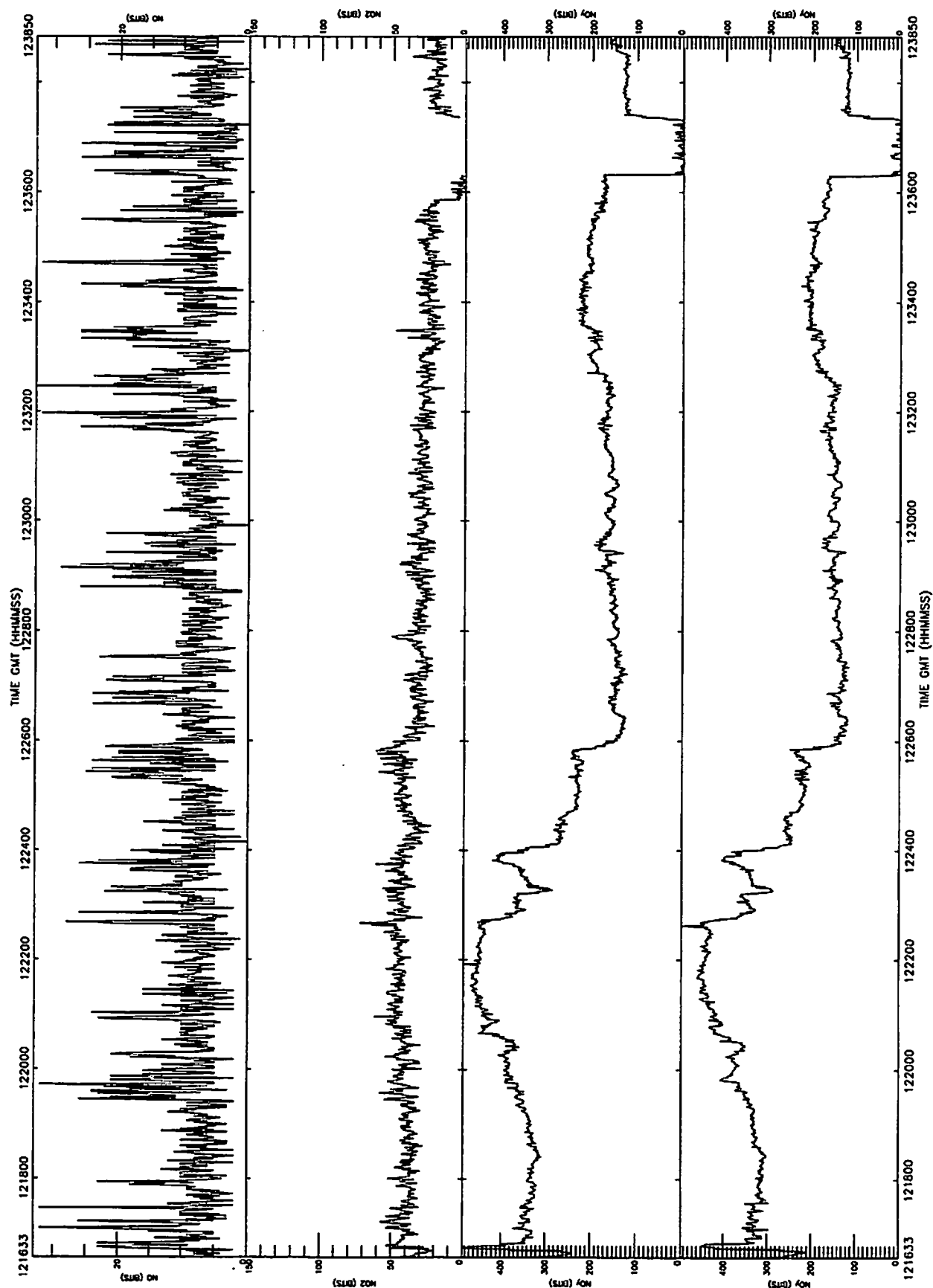
A571 18-AUG-97 P4 400'-5000' From 121633-123850 Plotted 11-Dec-1997 09:03



A571 18-AUG-97 P4 400'-5000' From 121633-123850 Plotted 11-Dec-1997 09:03



A571 18-AUG-97 P4 400'-5000' From 121633-123850 Plotted 11-Dec-1997 14:37



A571 18-AUG-97 P4 400'-5000' From 121633-123850 *Plotted 12-Dec-1997 14:16*

STATIC PRESSURE (MB)

No of obs 1338  
Mean 921.738  
Standard dev 57.4755  
Max value 1010.18  
Min value 852.438

DEICED TRUE TEMP (DEG K)

No of obs 1338  
Mean 290.794  
Standard dev 4.08485  
Max value 296.157  
Min value 285.617

DEW POINT (DEG K)

No of obs 1338  
Mean 284.292  
Standard dev 2.60757  
Max value 291.755  
Min value 281.484

OZONE MIXING RATIO (PPB)

No of obs 1338  
Mean 69.3189  
Standard dev 9.20859  
Max value 85.1277  
Min value 58.1888

PCASP CONCENTRATION (CM-3)

No of obs 1338  
Mean 1241.66  
Standard dev 254.777  
Max value 2107.12  
Min value 93.7137

FSSP CONCENTRATION (CM-3)

No of obs 1338  
Mean 2.256708e-02  
Standard dev 4.798769e-02  
Max value 0.238163  
Min value 0.000000

RADAR HEIGHT (METRES)

No of obs 1338  
Mean 911.068  
Standard dev 527.666  
Max value 1522.15  
Min value 105.956

CORRECTED LATITUDE (DEGREES)

No of obs 1338  
Mean 53.8663  
Standard dev 0.142787  
Max value 54.1021  
Min value 53.6090

CORRECTED LONGITUDE (DEGREES)

No of obs 1338  
Mean 5.80359  
Standard dev 0.542170  
Max value 6.76926  
Min value 4.91127

NORTHWARD WIND COMPT (M S-1)

No of obs 1338  
Mean 5.34040  
Standard dev 2.14721  
Max value 8.39075  
Min value -0.192146

EASTWARD WIND COMPT (M S-1)

No of obs 1338  
Mean -0.848773  
Standard dev 1.11236  
Max value 0.755646  
Min value -4.10670

VERTICAL WIND COMPT (M S-1)

No of obs 1338  
Mean -8.753458e-02  
Standard dev 0.289924  
Max value 0.645531  
Min value -1.12927

WIND SPEED (MS-1)

No of obs 1338  
Mean 5.67213  
Standard dev 1.70671  
Max value 8.39665  
Min value 2.34079

WIND DIRECTION (DEG)

Mean 170.969

TRUE AIR SPEED (M S-1)

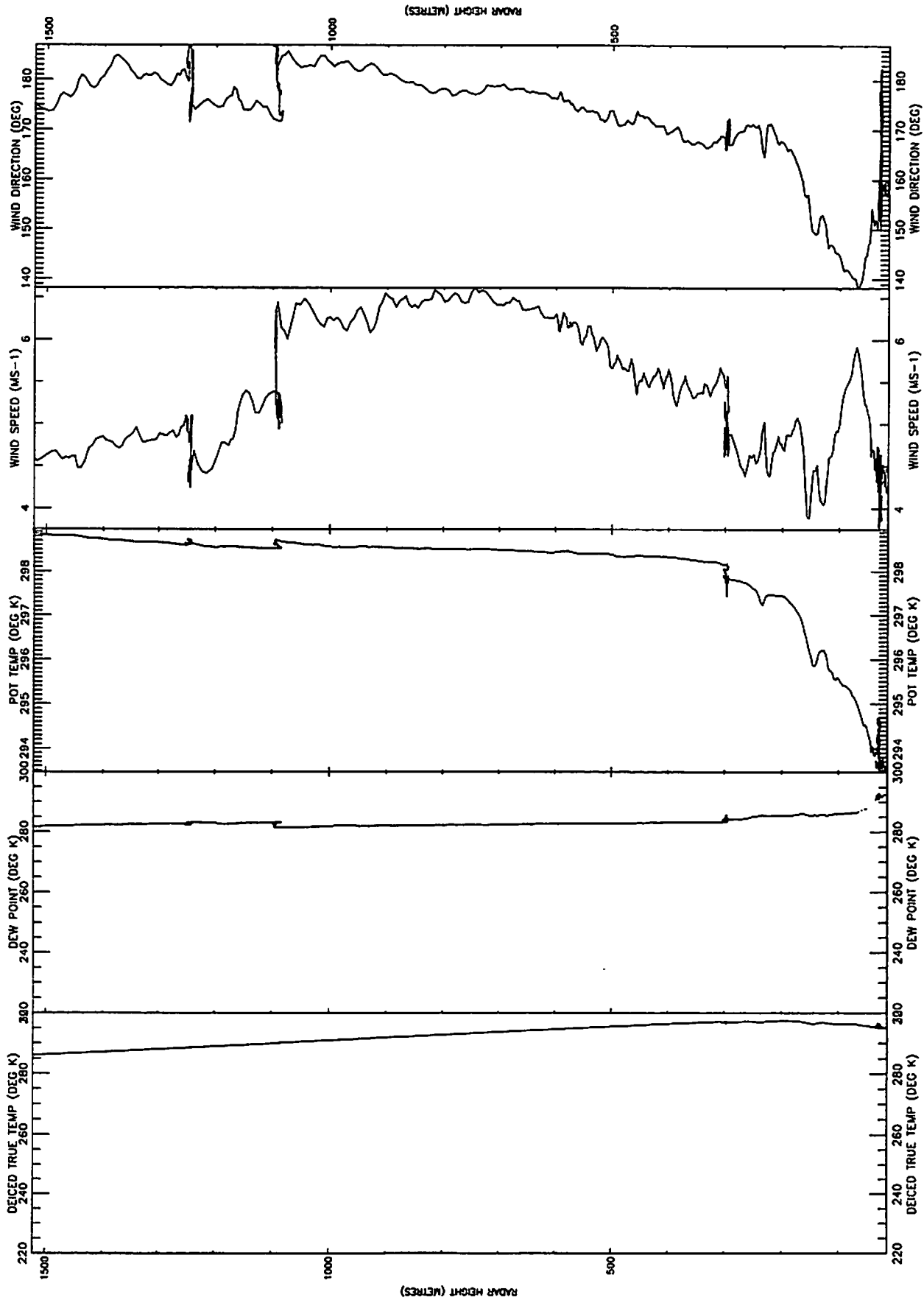
No of obs 1338  
Mean 98.8957  
Standard dev 3.56614  
Max value 105.567  
Min value 84.7133

HEADING (DEG)

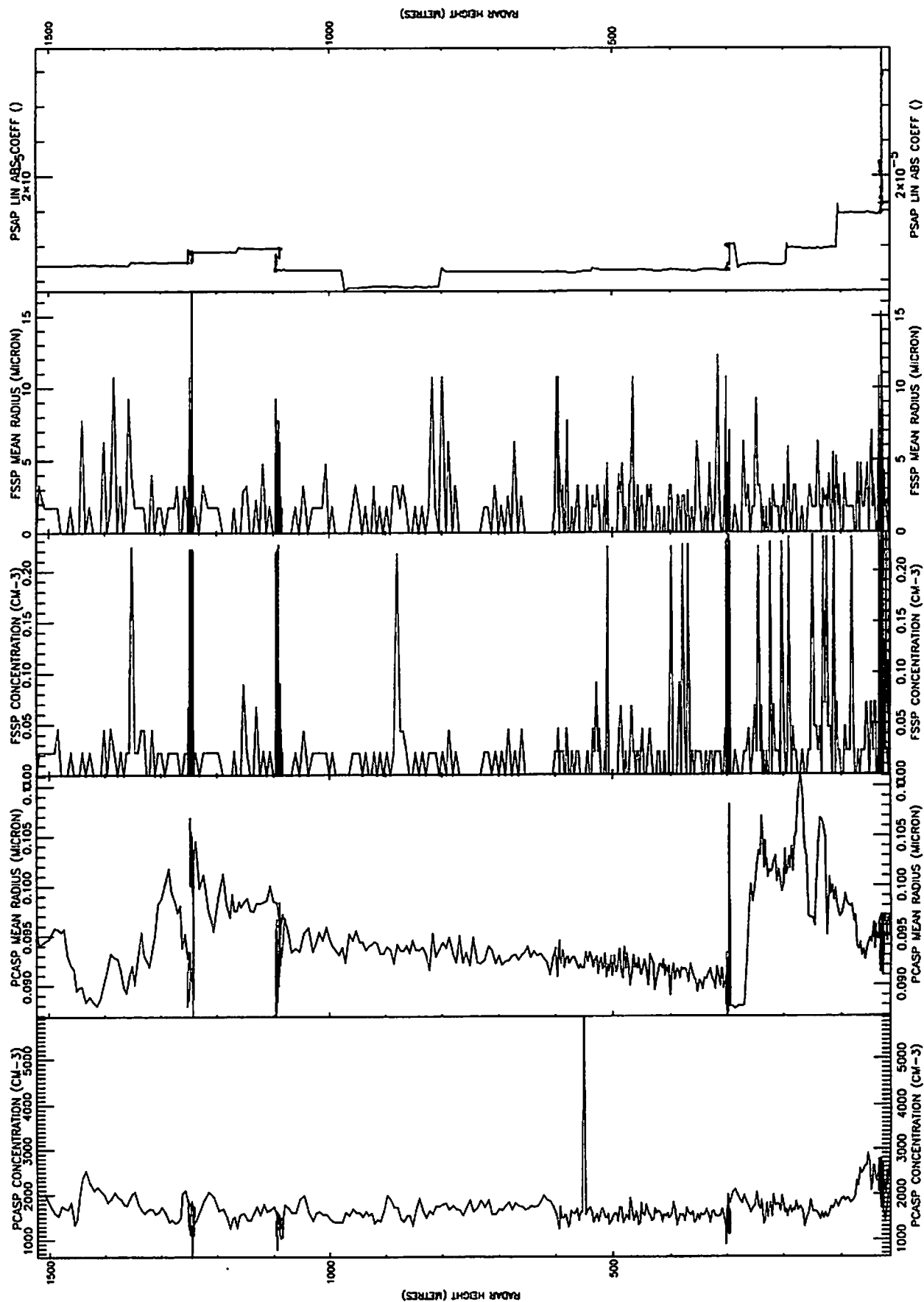
Mean 65.8239



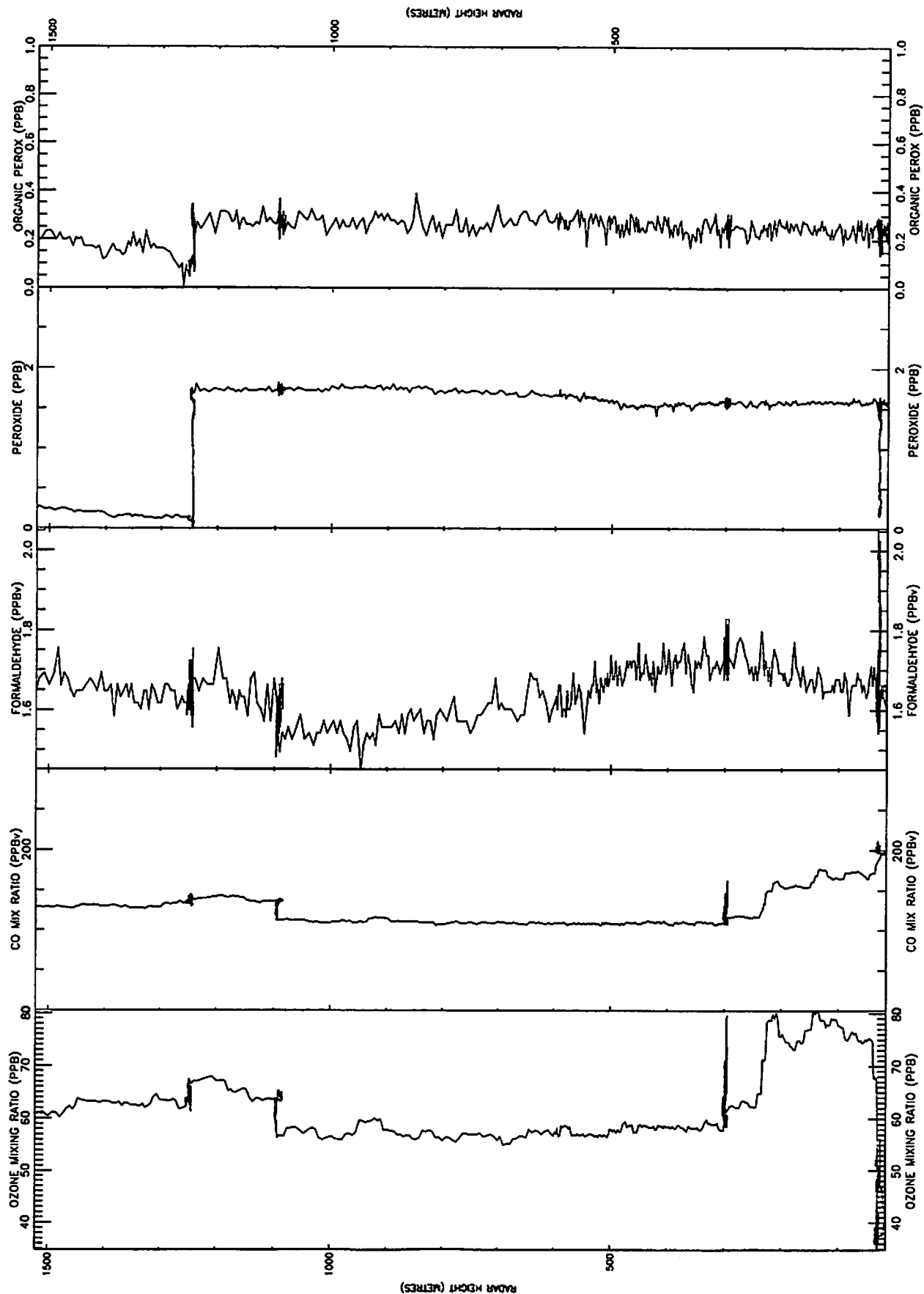
A571 18-AUG-97 P5 5000'-50' From 123850-125615 Plotted 11-Dec-1997 09:08



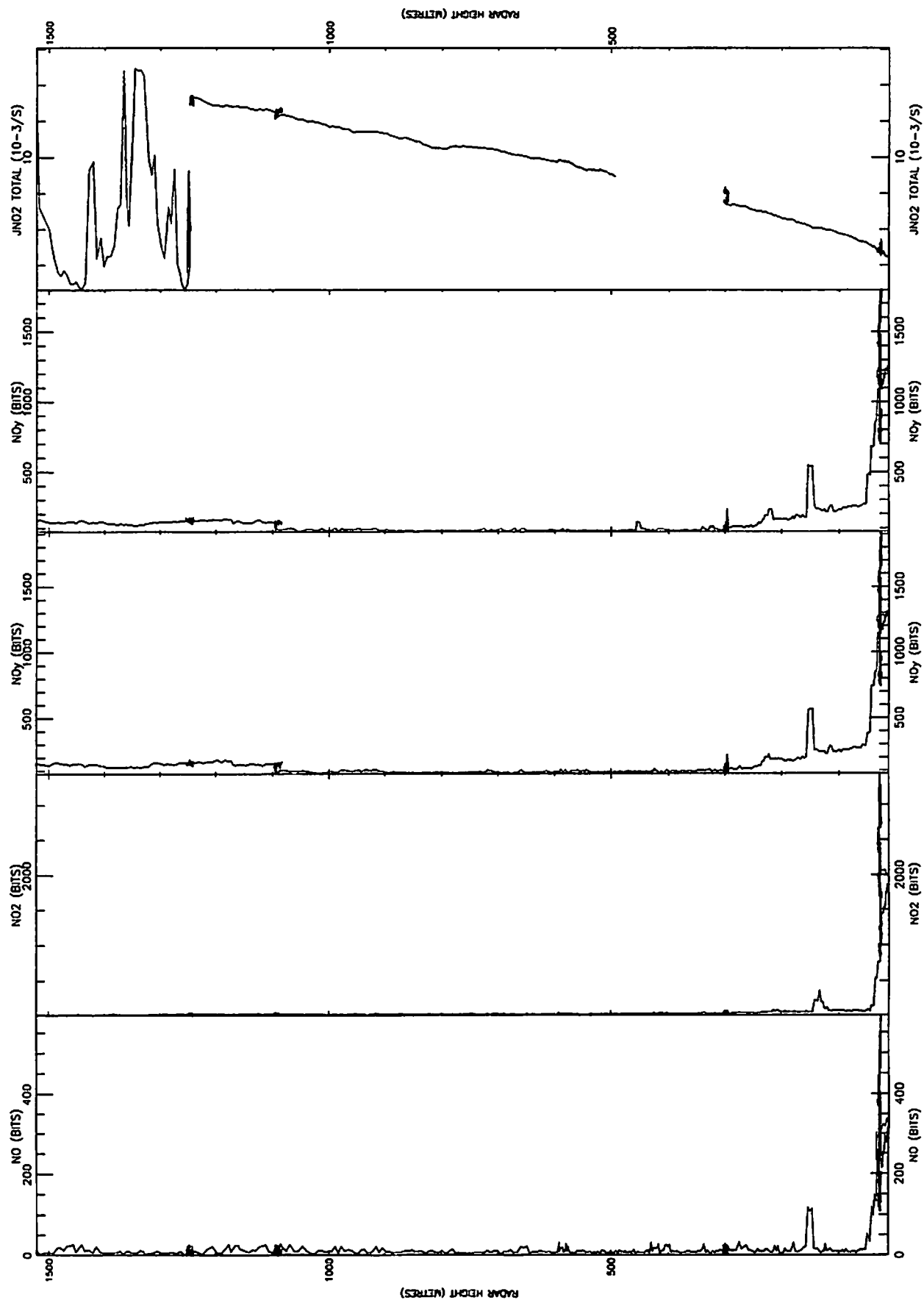
A571 18-AUG-97 P5 5000'-50' From 123850-125615 Plotted 12-Dec-1997 14:22



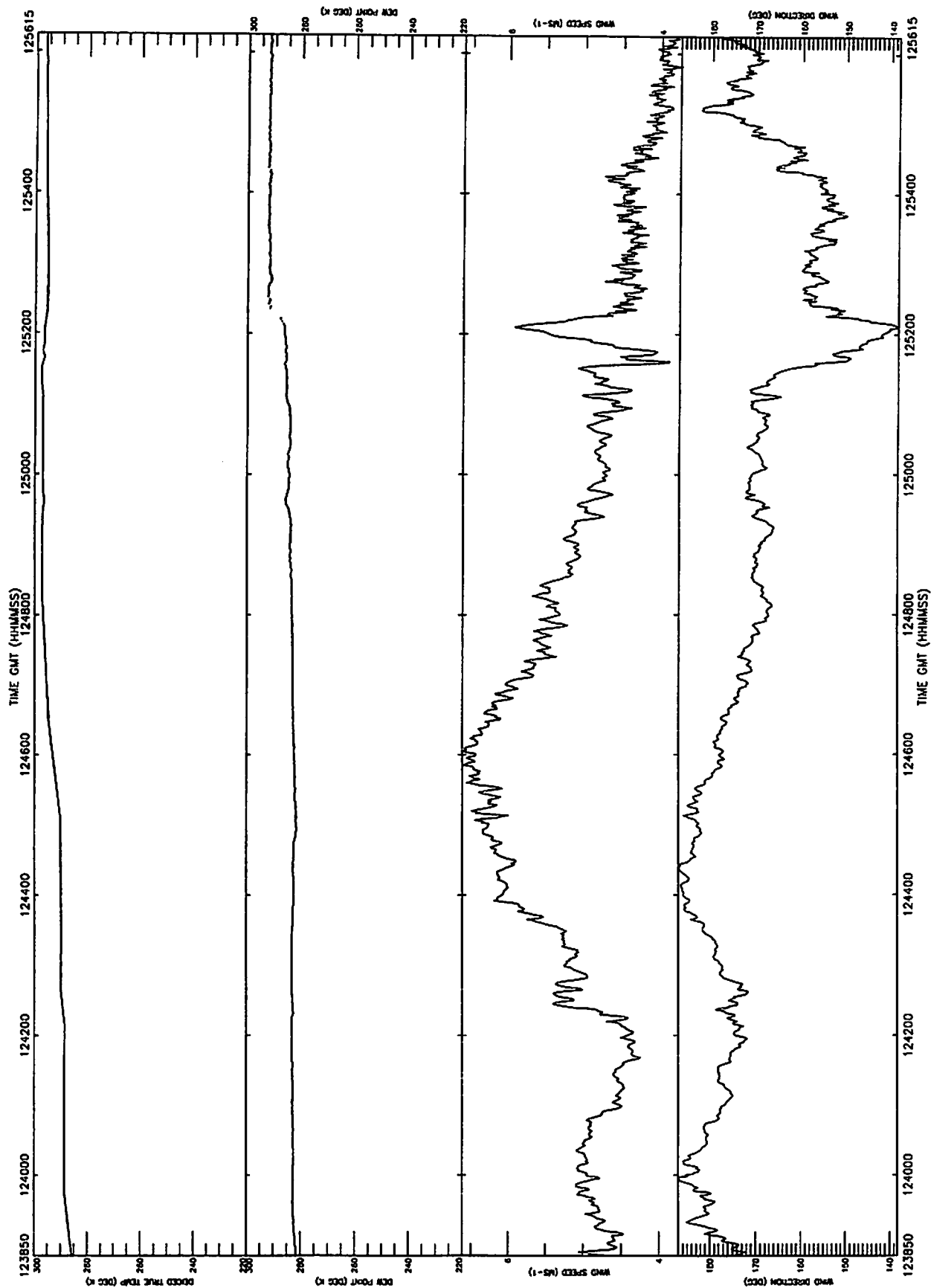
A571 18-AUG-97 P5 5000'-50' From 123850-125615 Plotted 11-Dec-1997 09:08



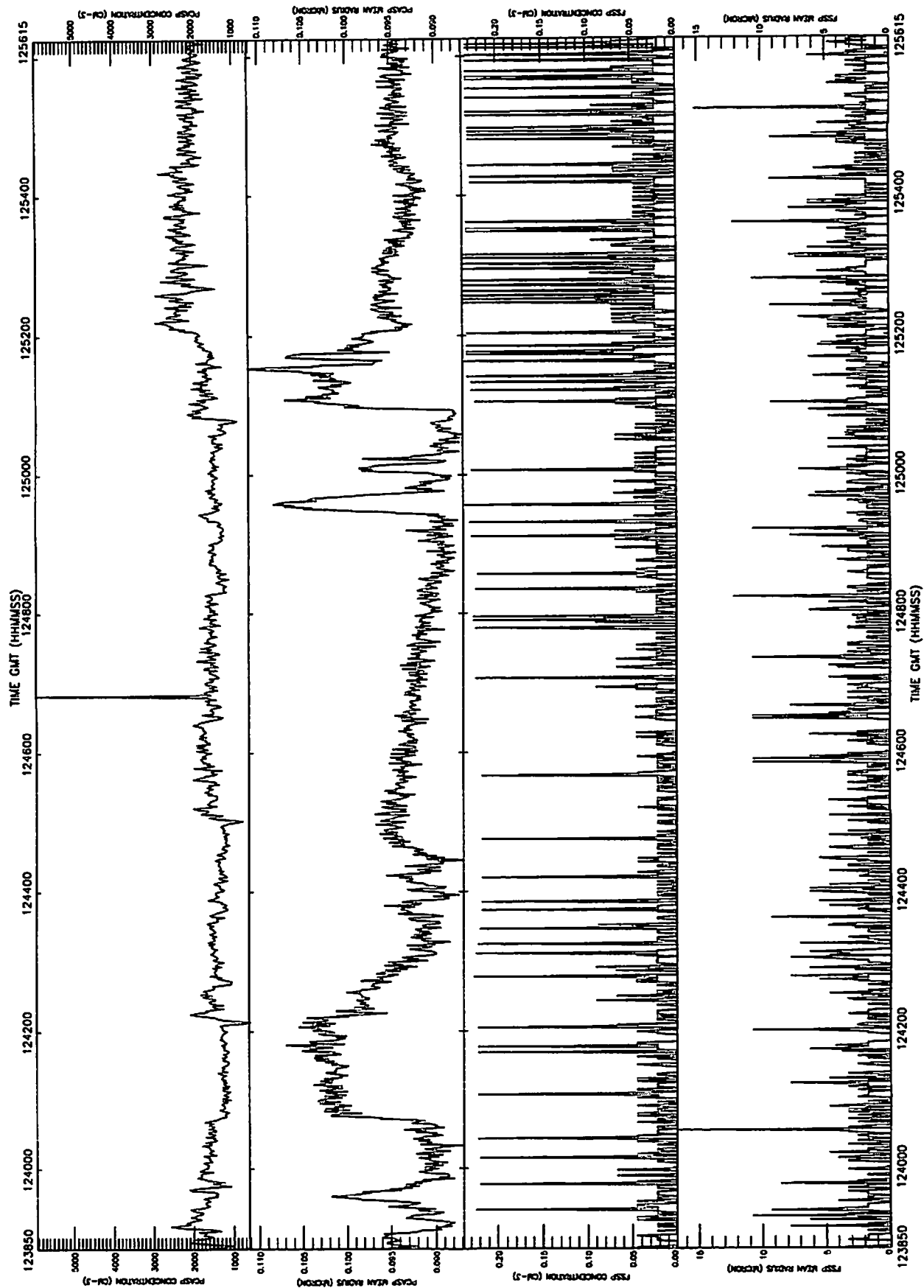
A571 18-AUG-97 P5 5000'-50' From 123850-125615 Plotted 11-Dec-1997 09:08



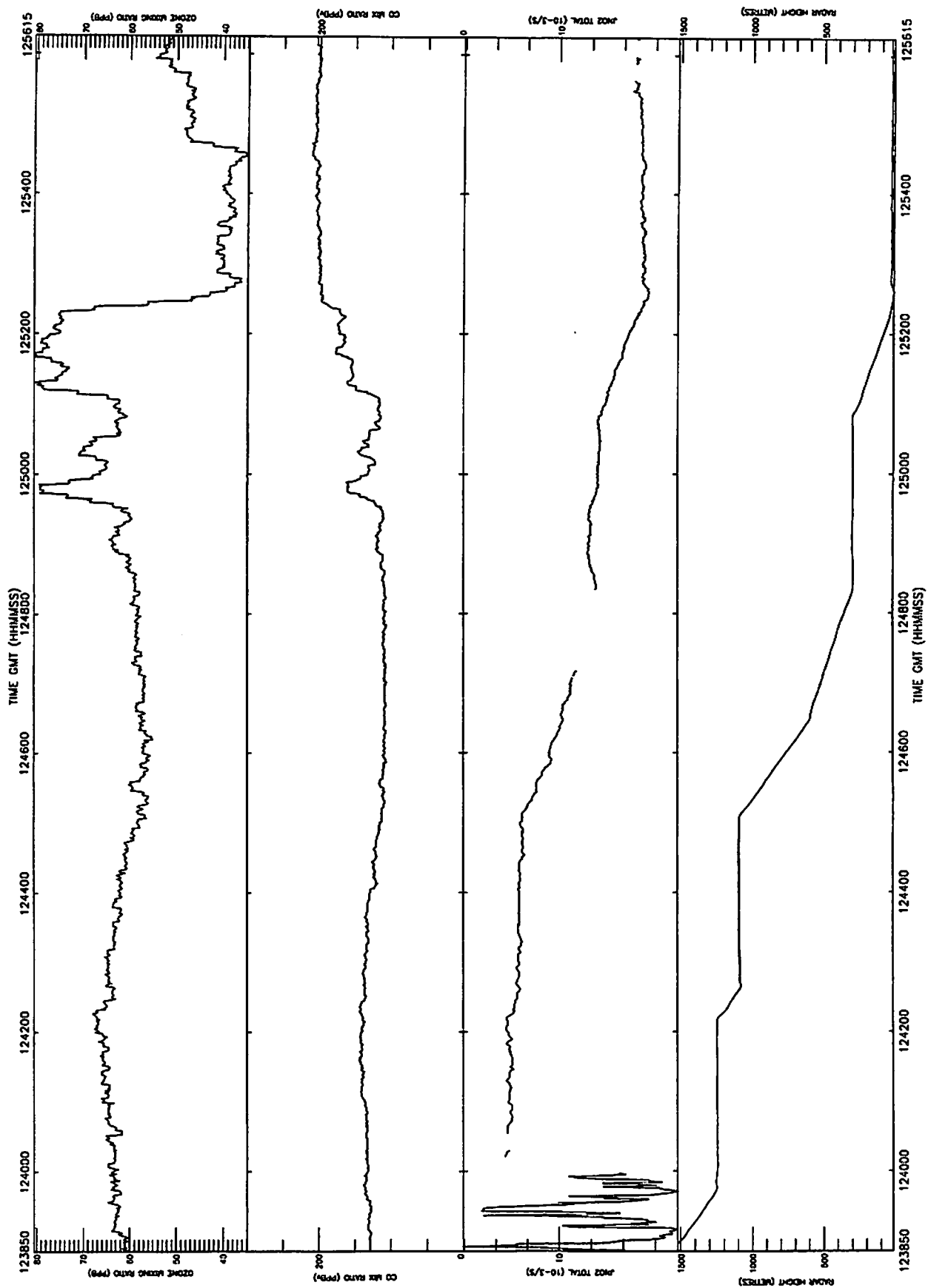
A571 18-AUG-97 P5 5000'-50' From 123850-125615 Plotted 11-Dec-1997 09:08



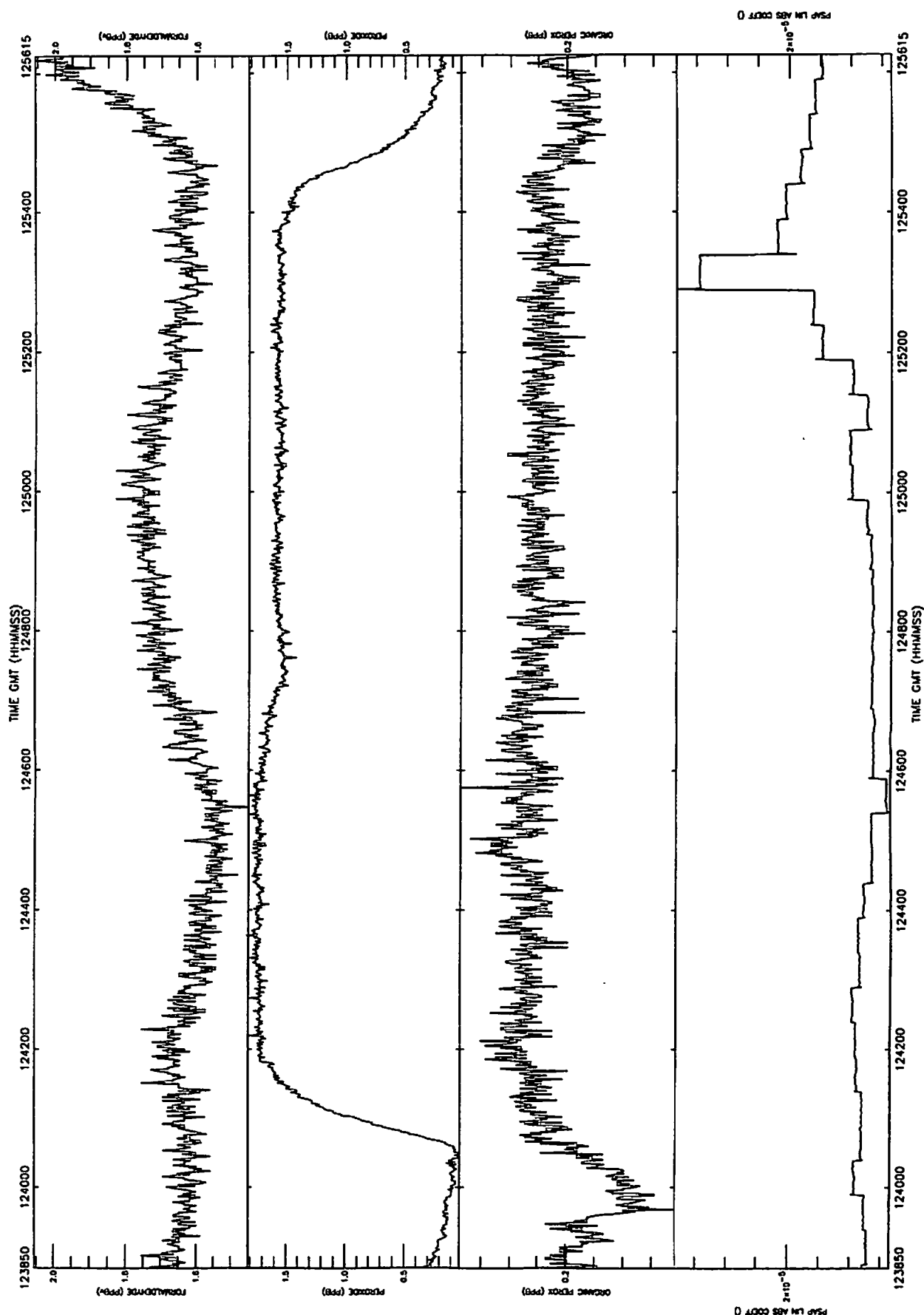
A571 18-AUG-97 P5 5000'-50' From 123850-125615 Plotted 12-Dec-1997 14:22



A571 18-AUG-97 P5 5000'-50' From 123850-125615 Plotted 11-Dec-1997 09:08

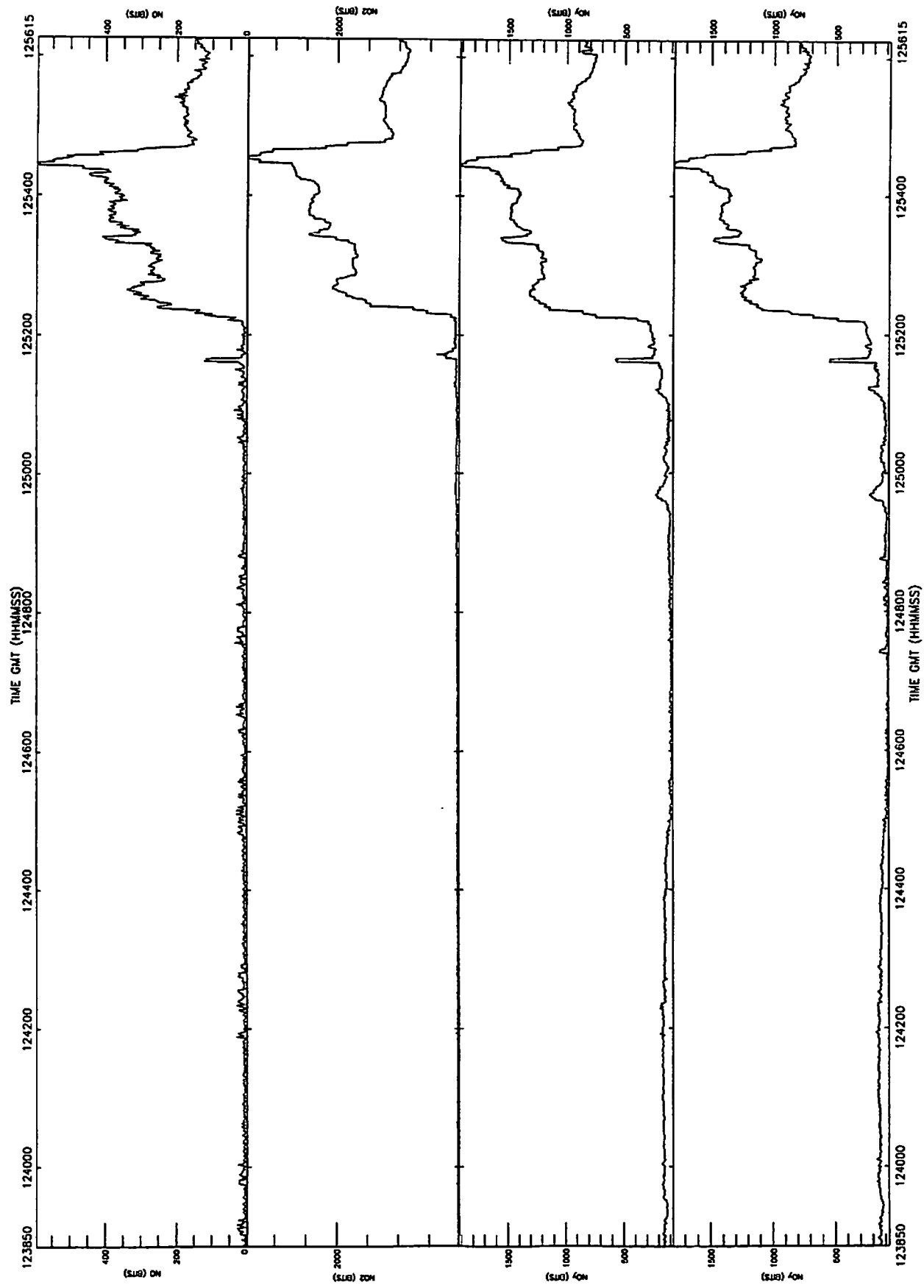


A571 18-AUG-97 P5 5000'-50' From 123850-125615 Plotted 11-Dec-1997 09:08





A571 18-AUG-97 P5 5000'-50' From 123850-125615 Plotted 11-Dec-1997 09:09



A571 18-AUG-97 P5 5000'-50' From 123850-125615 *Plotted 12-Dec-1997 14:22*

STATIC PRESSURE (MB)

No of obs 1046  
Mean 955.594  
Standard dev 54.3344  
Max value 1021.34  
Min value 854.600

DEICED TRUE TEMP (DEG K)

No of obs 1046  
Mean 283.335  
Standard dev 3.53810  
Max value 297.479  
Min value 285.838

DEW POINT (DEG K)

No of obs 1046  
Mean 285.285  
Standard dev 3.81815  
Max value 292.583  
Min value 281.404

OZONE MIXING RATIO (PPB)

No of obs 1046  
Mean 58.9700  
Standard dev 9.95263  
Max value 80.5293  
Min value 34.8313

PCASP CONCENTRATION (CM-3)

No of obs 1046  
Mean 1664.58  
Standard dev 399.976  
Max value 5929.08  
Min value 622.082

FSSP CONCENTRATION (CM-3)

No of obs 1046  
Mean 3.183531e-02  
Standard dev 5.541008e-02  
Max value 0.238170  
Min value 0.000000

RADAR HEIGHT (METRES)

No of obs 1046  
Mean 609.877  
Standard dev 496.988  
Max value 1522.15  
Min value 15.2598

CORRECTED LATITUDE (DEGREES)

No of obs 1046  
Mean 54.2677  
Standard dev 9.715140e-02  
Max value 54.4351  
Min value 54.1021

CORRECTED LONGITUDE (DEGREES)

No of obs 1046  
Mean 7.52507  
Standard dev 0.430604  
Max value 8.25605  
Min value 6.76926

NORTHWARD WIND COMPT (M S-1)

No of obs 1046  
Mean 4.92102  
Standard dev 0.783479  
Max value 6.60842  
Min value 3.46097

EASTWARD WIND COMPT (M S-1)

No of obs 1046  
Mean -0.653889  
Standard dev 0.809699  
Max value 0.721931  
Min value -3.90214

VERTICAL WIND COMPT (M S-1)

No of obs 1046  
Mean 0.478022  
Standard dev 0.228834  
Max value 1.03766  
Min value -1.724243e-03

WIND SPEED (MS-1)

No of obs 1046  
Mean 5.03974  
Standard dev 0.716798  
Max value 6.61675  
Min value 3.74856

WIND DIRECTION (DEG)

Mean 172.431

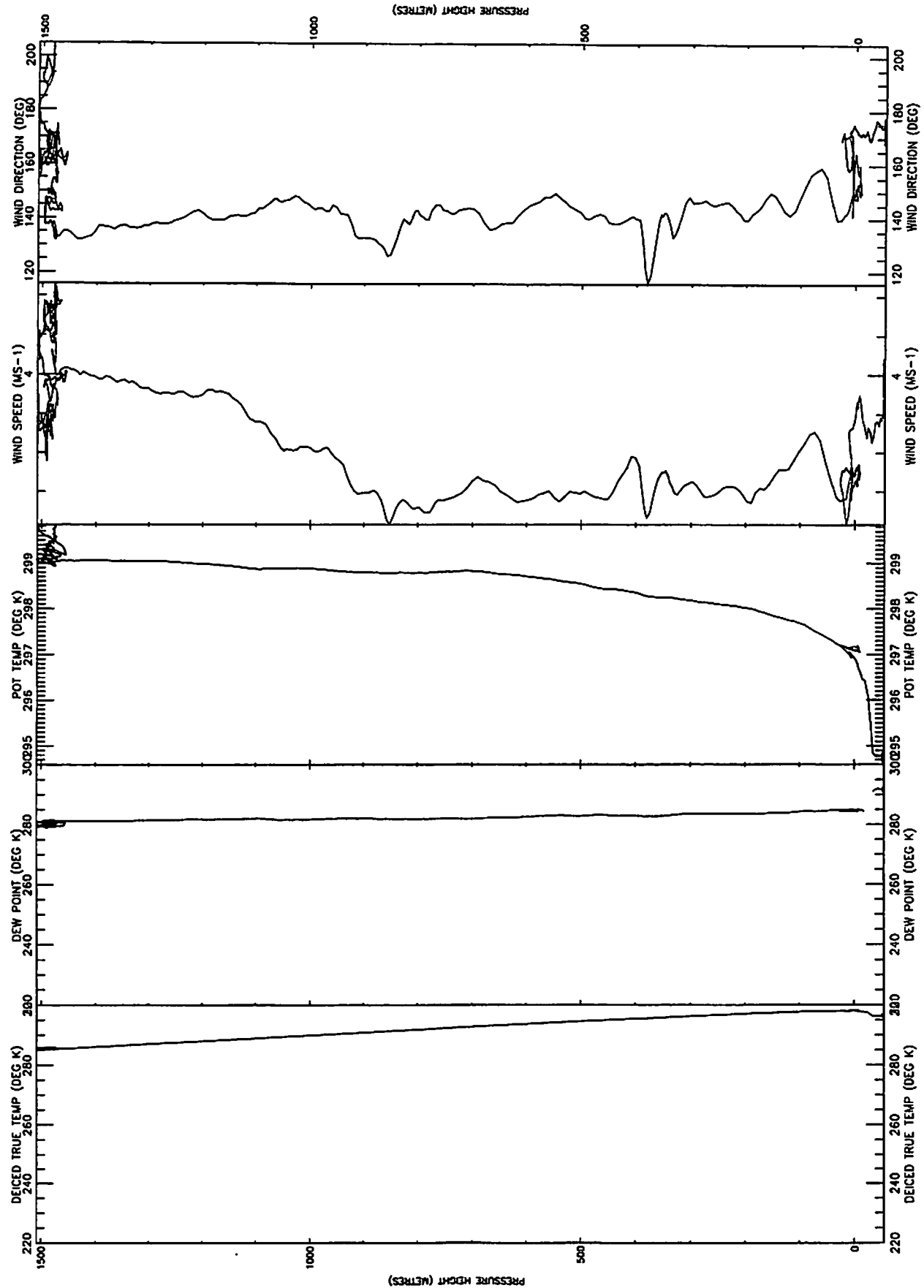
TRUE AIR SPEED (M S-1)

No of obs 1046  
Mean 97.9823  
Standard dev 2.70001  
Max value 102.526  
Min value 92.4635

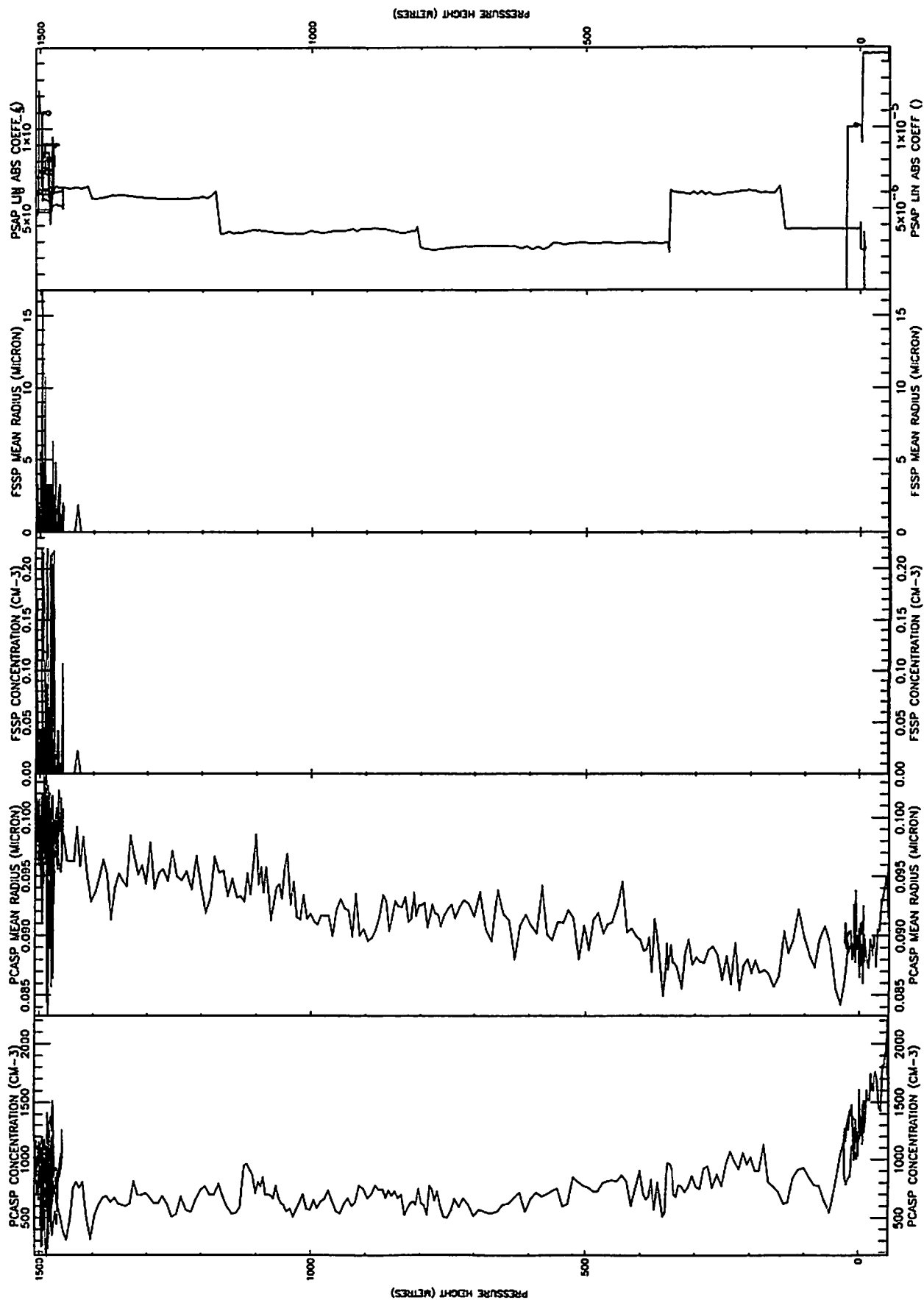
HEADING (DEG)

Mean 69.0608

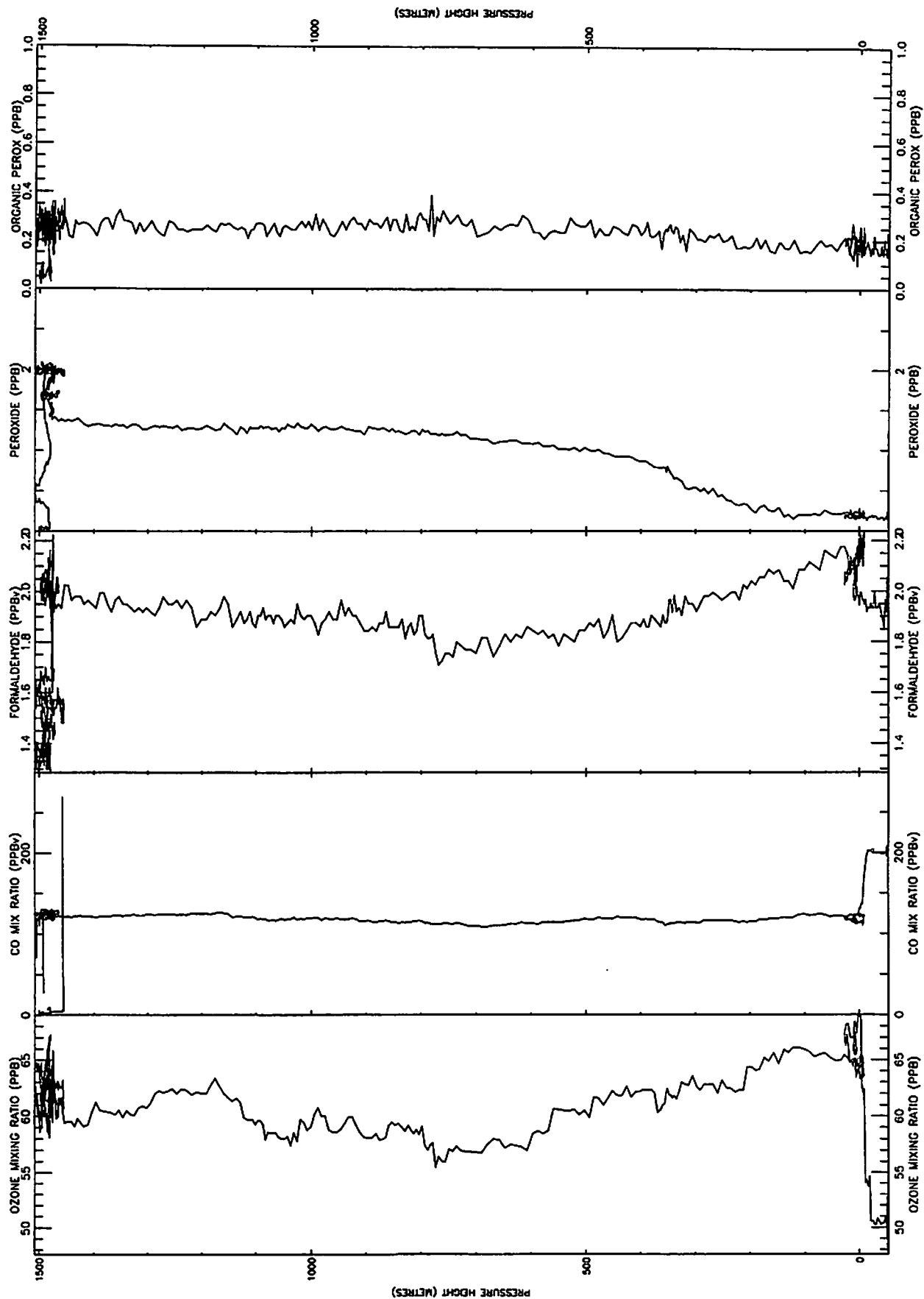
A571 18-AUG-97 p5up 50'-5200' From 125615-131207 Plotted 11-Dec-1997 09:14



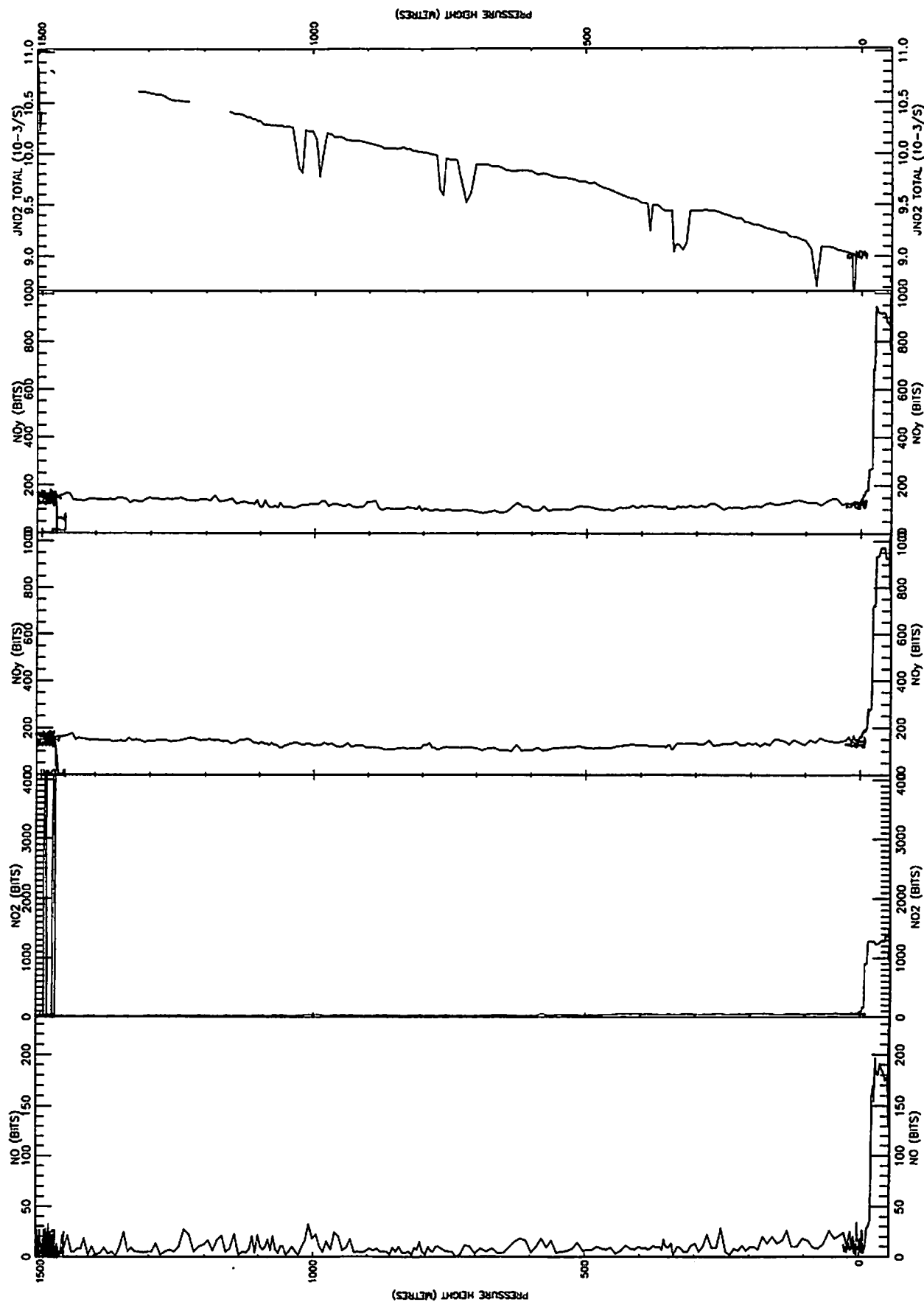
A571 18-AUG-97 p5up 50'-5200' From 125615-131207 Plotted 12-Dec-1997 14:28



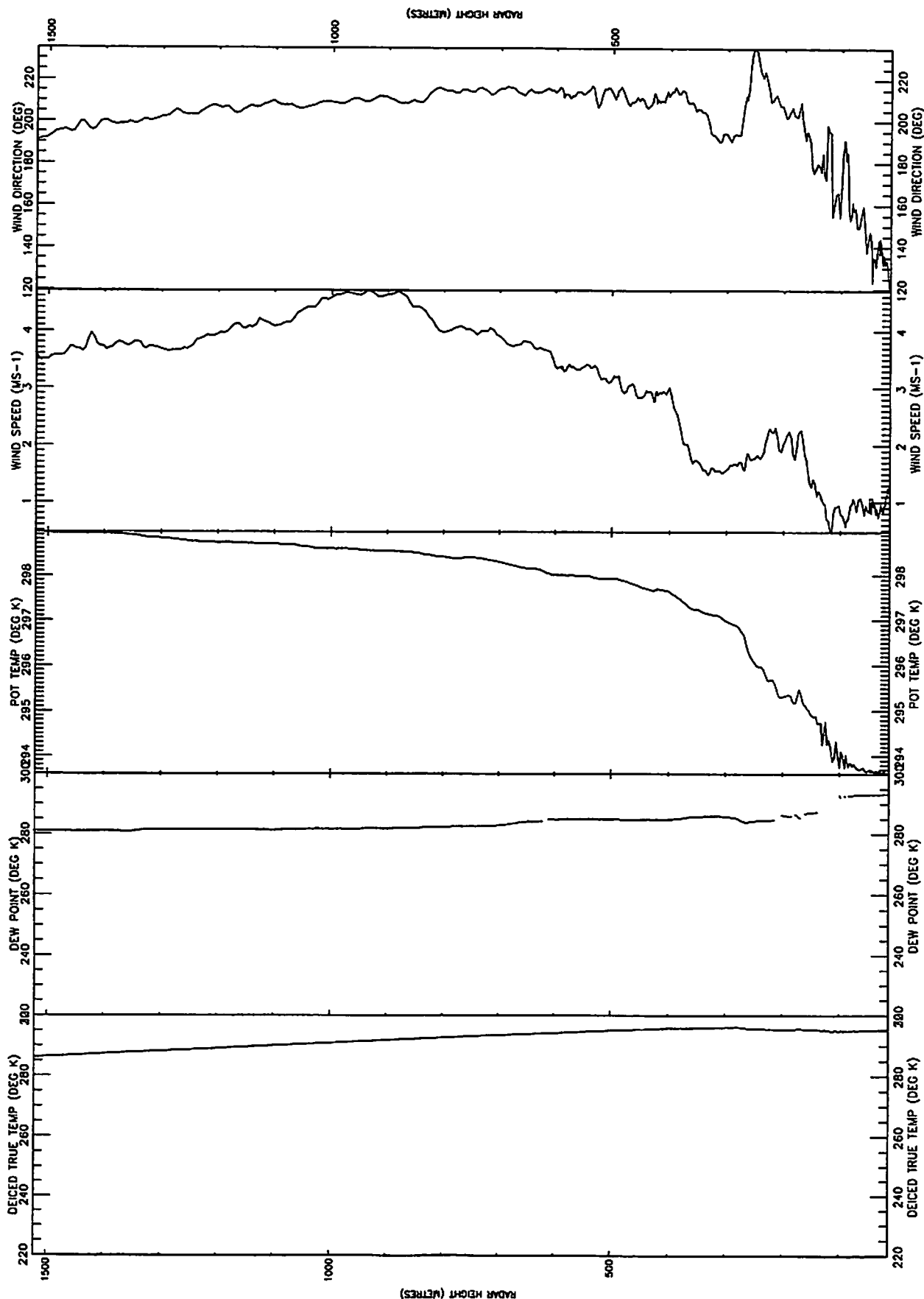
A571 18-AUG-97 p5up 50'-5200' From 125615-131207 Plotted 11-Dec-1997 09:14



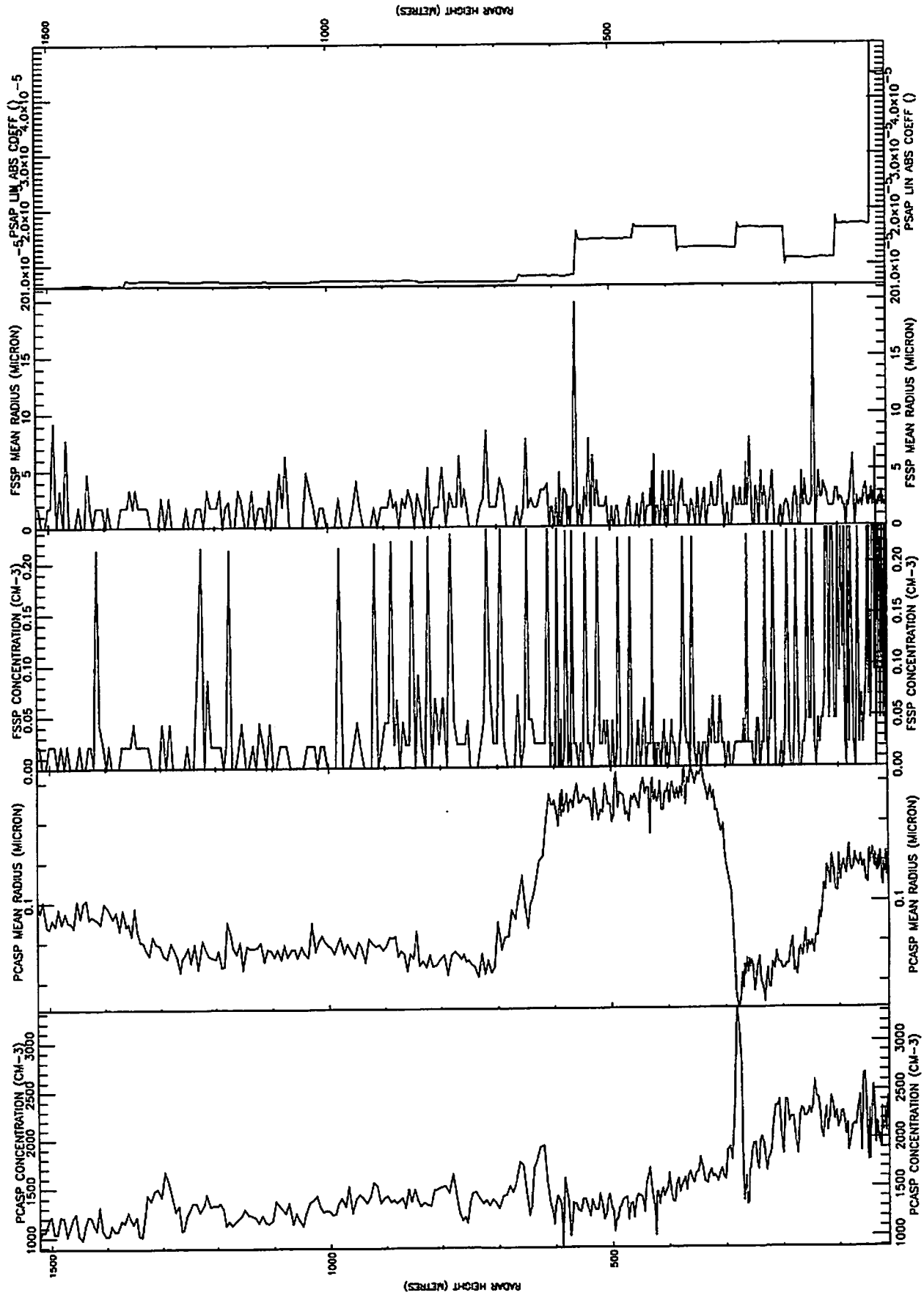
A571 18-AUG-97 p5up 50'-5200' From 125615-131207 Plotted 11-Dec-1997 09:14



A571 18-AUG-97 P6 5200'-50' From 131207-131847 Plotted 11-Dec-1997 09:17

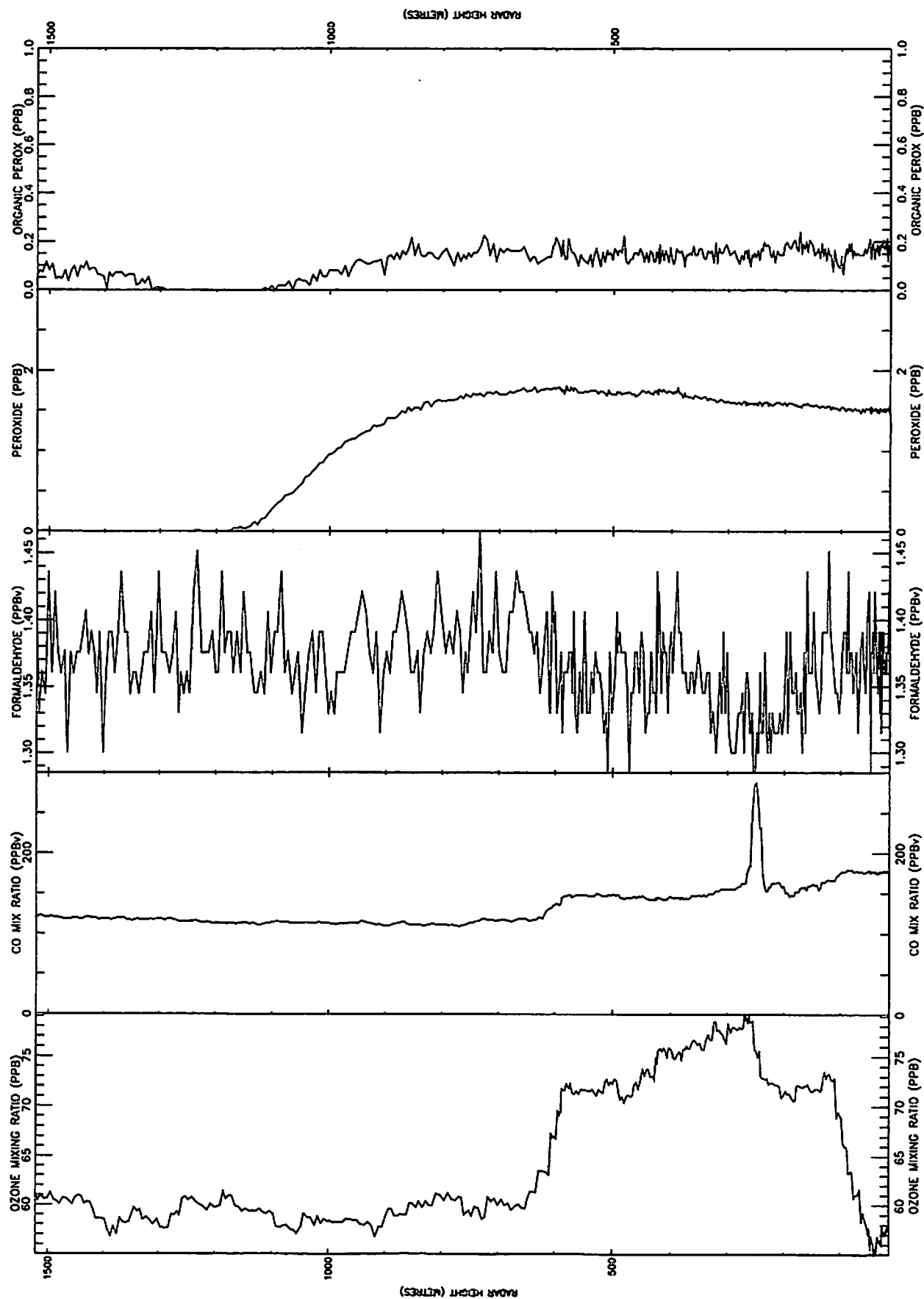


A571 18-AUG-97 P6 5200'-50' From 131207-131847 Plotted 12-Dec-1997 14:31

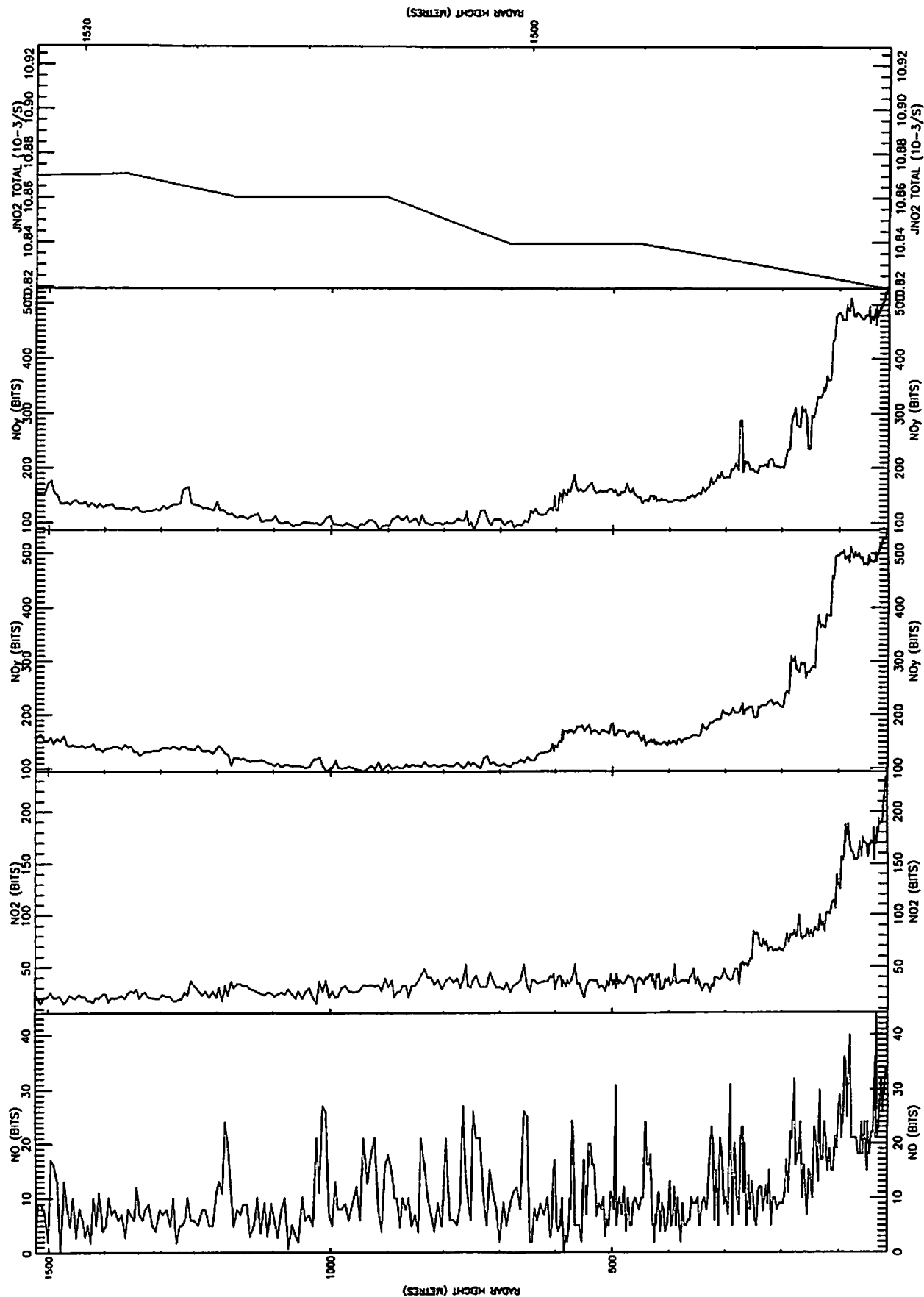




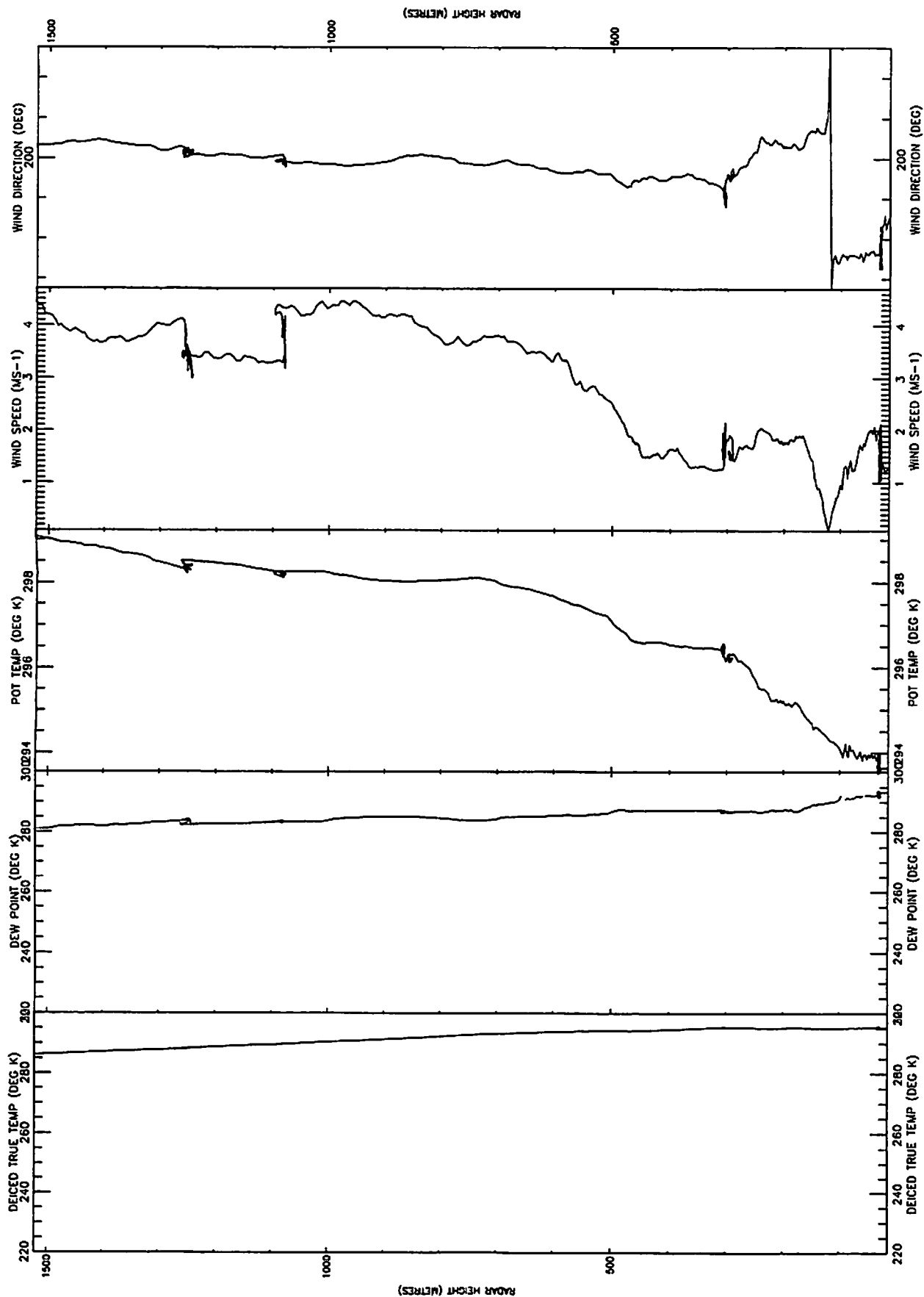
A571 18-AUG-97 P6 5200'-50' From 131207-131847 Plotted 11-Dec-1997 09:17



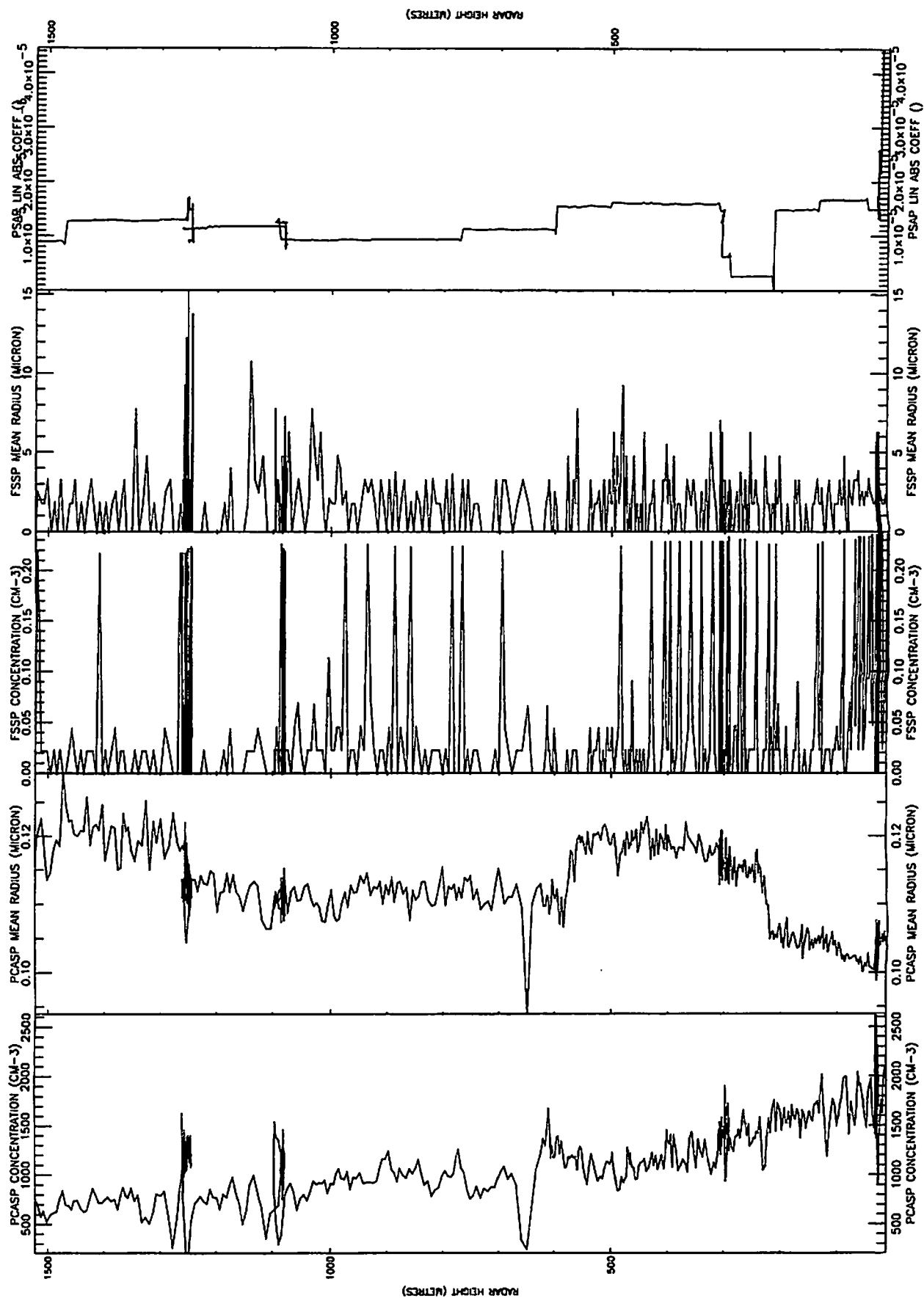
A571 18-AUG-97 P6 5200'-50' From 131207-131847 Plotted 11-Dec-1997 09:17



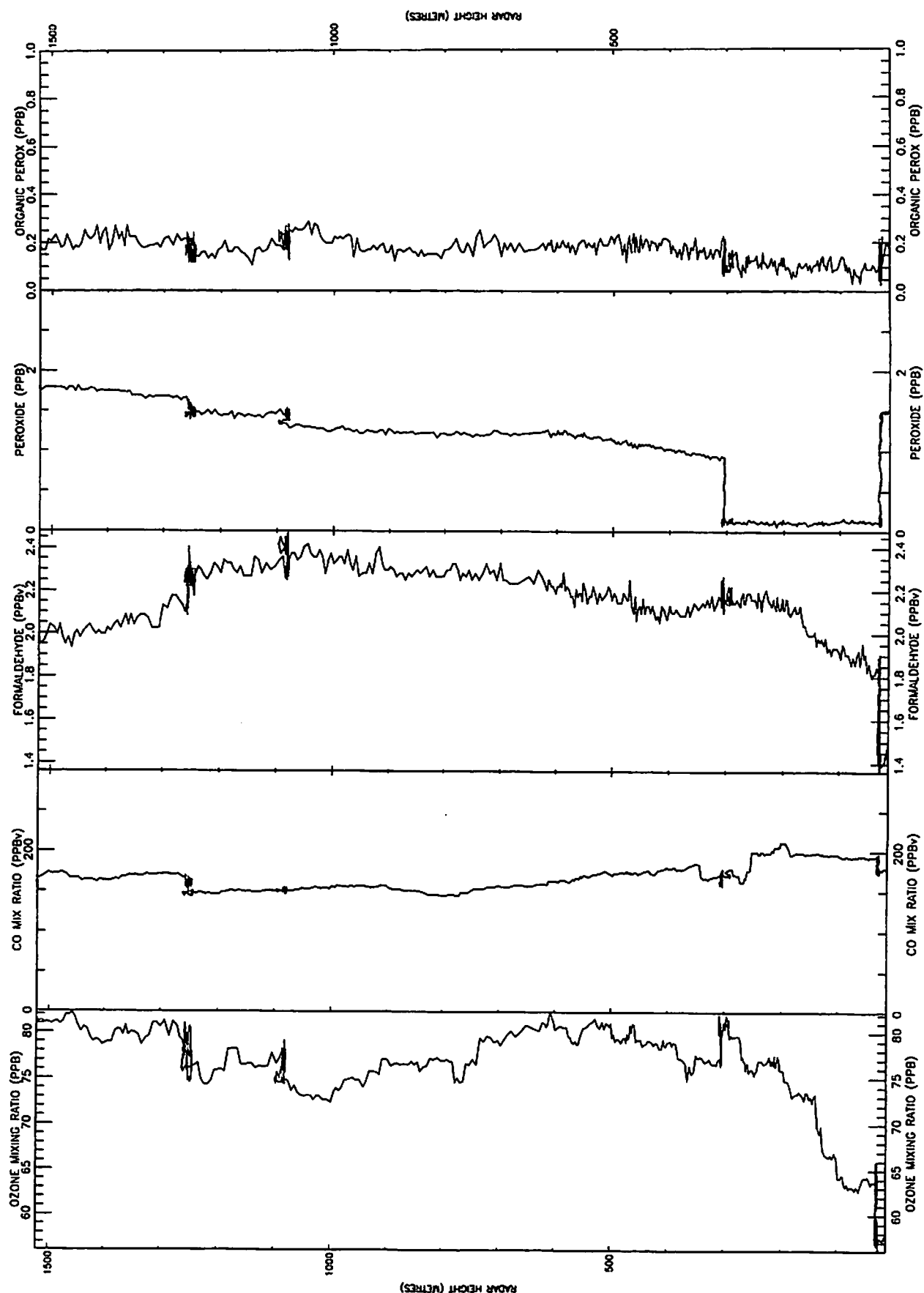
A571 18-AUG-97 P7 50'-5200' From 131847-134012 Plotted 11-Dec-1997 09:23



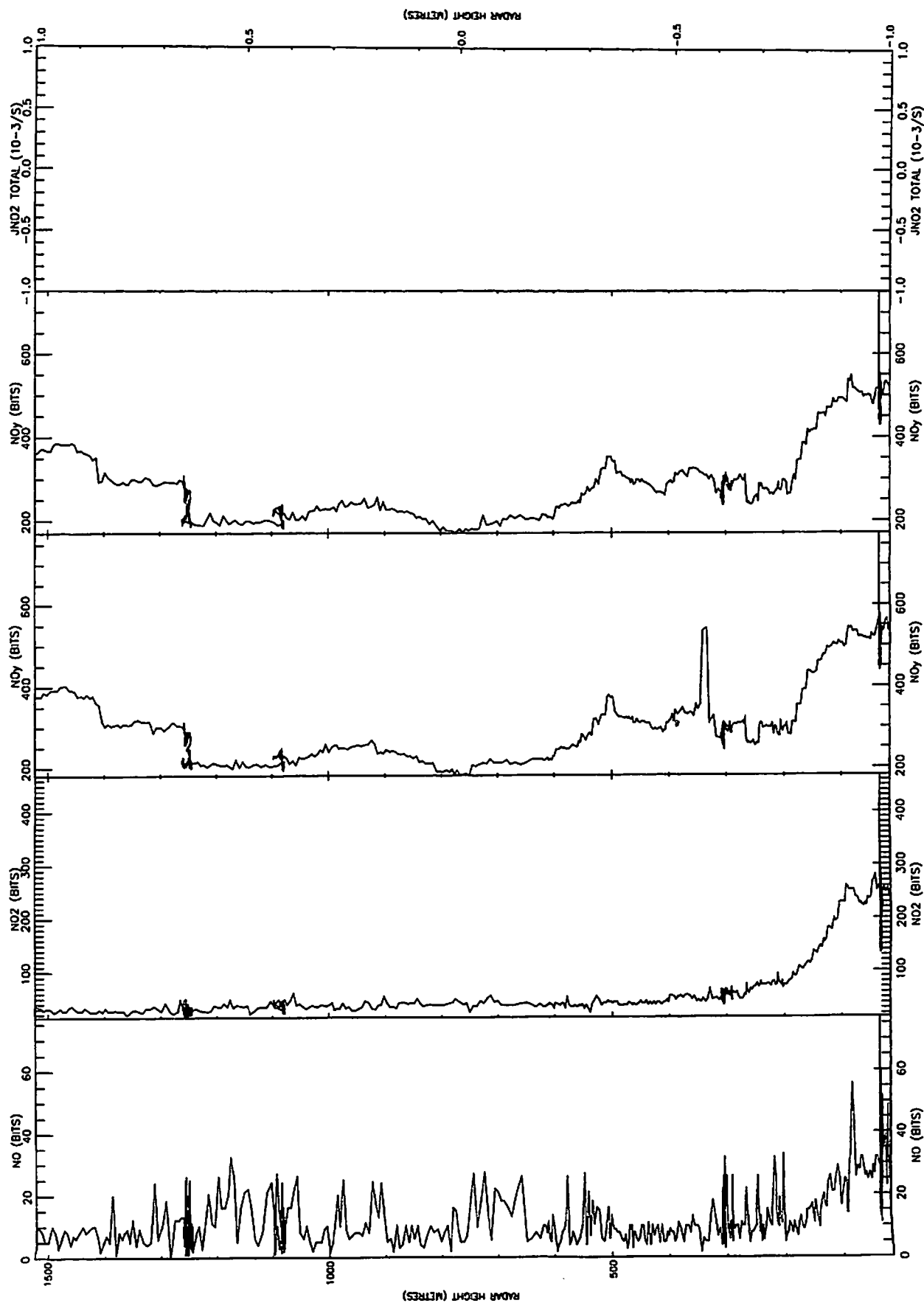
A571 18-AUG-97 P7 50'-5200' From 131847-134012 Plotted 12-Dec-1997 14:38



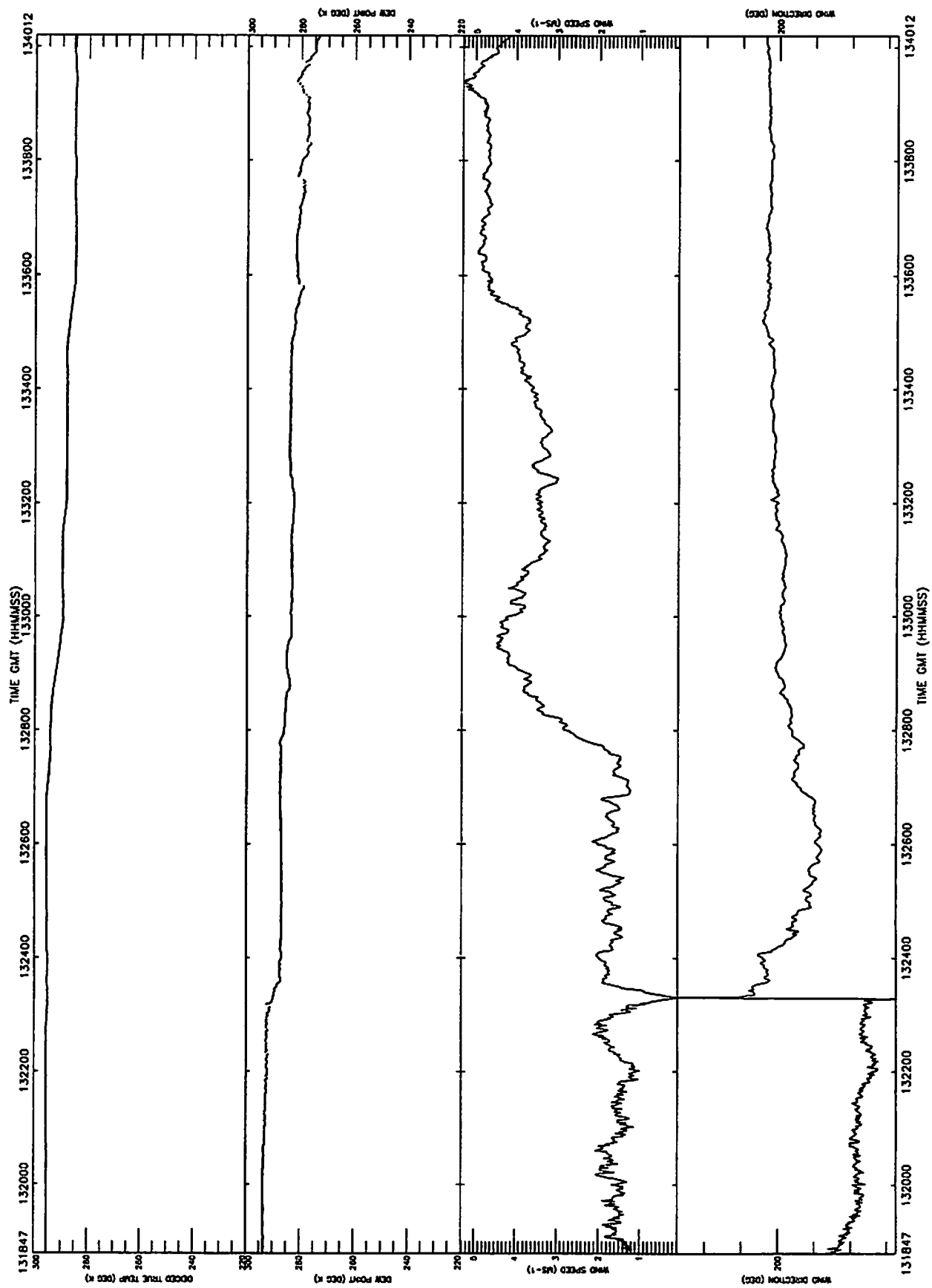
A571 18-AUG-97 P7 50'-5200' From 131847-134012 Plotted 11-Dec-1997 09:23



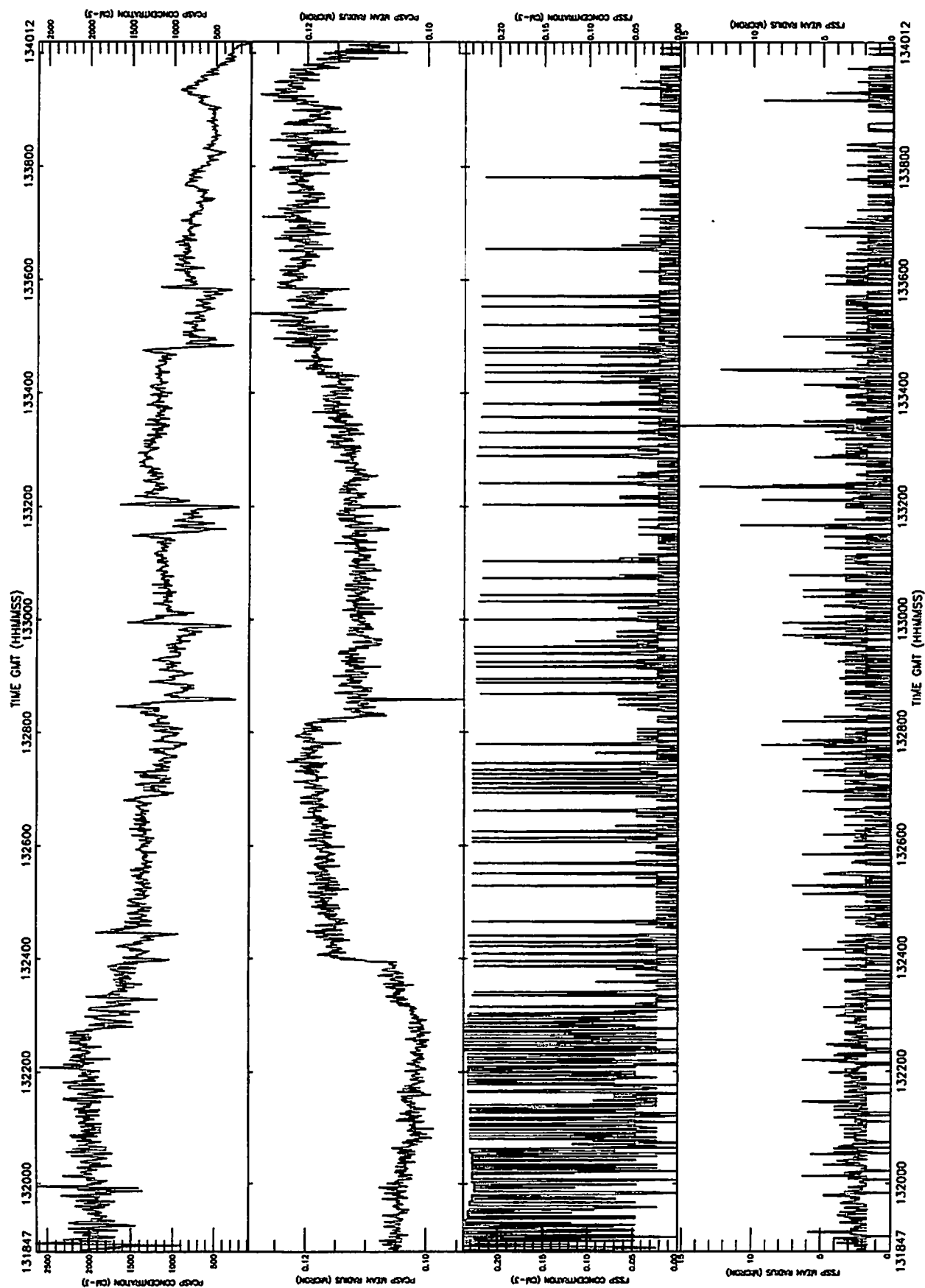
A571 18-AUG-97 P7 50'-5200' From 131847-134012 Plotted 11-Dec-1997 09:23



A571 18-AUG-97 P7 50'-5200' From 131847-134012 Plotted 11-Dec-1997 09:23

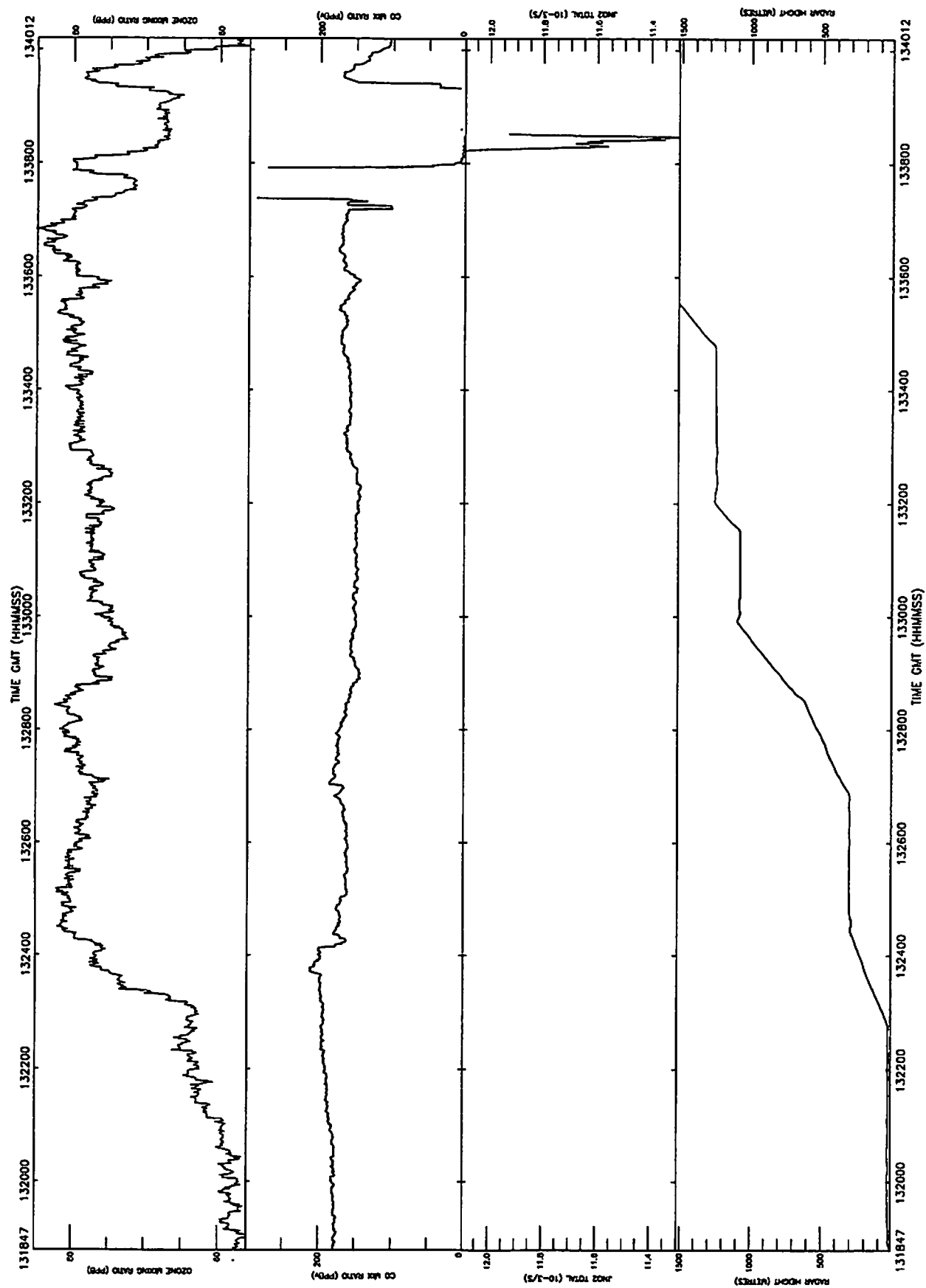


A571 18-AUG-97 P7 50'-5200' From 131847-134012 Plotted 12-Dec-1997 14:38

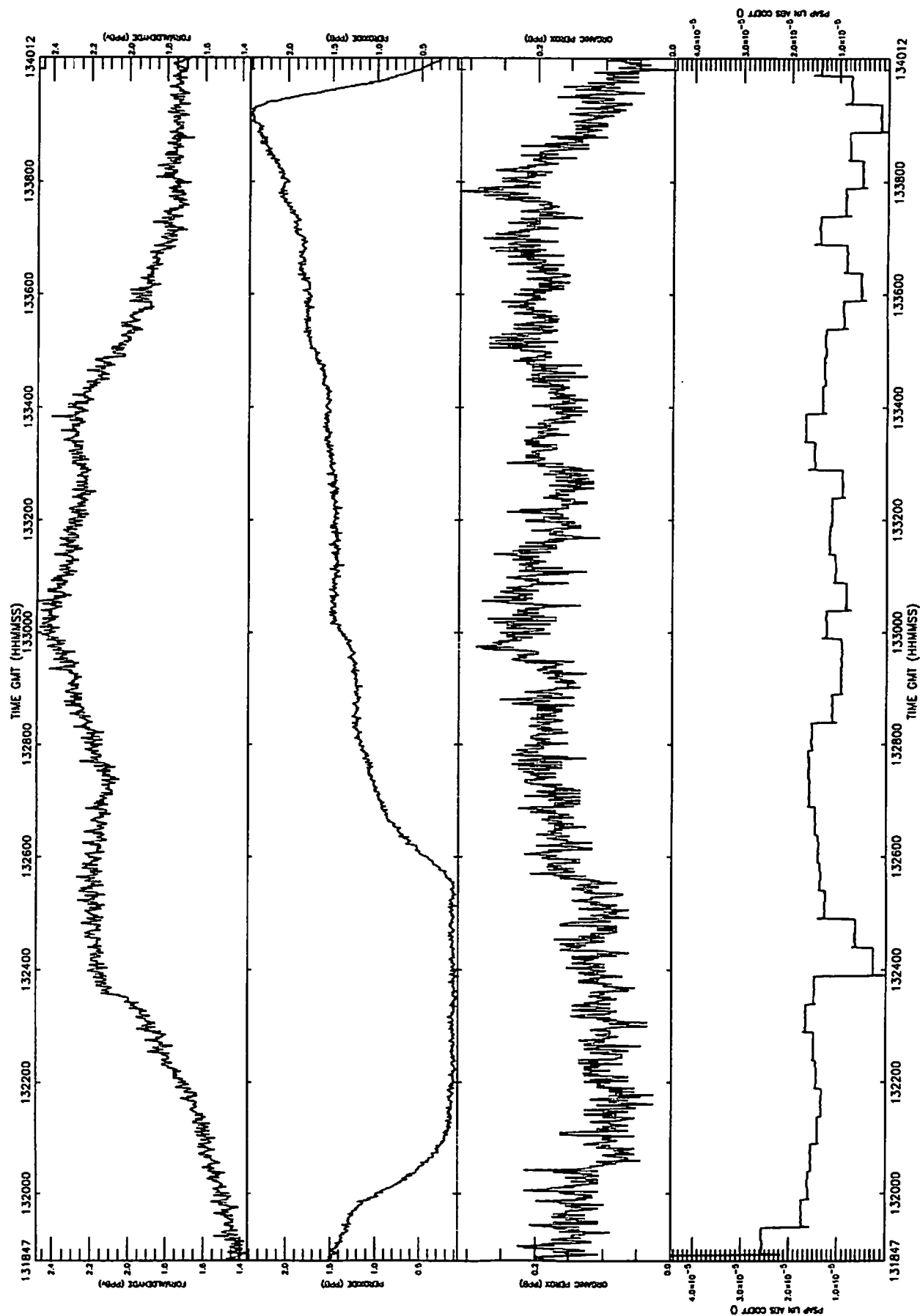




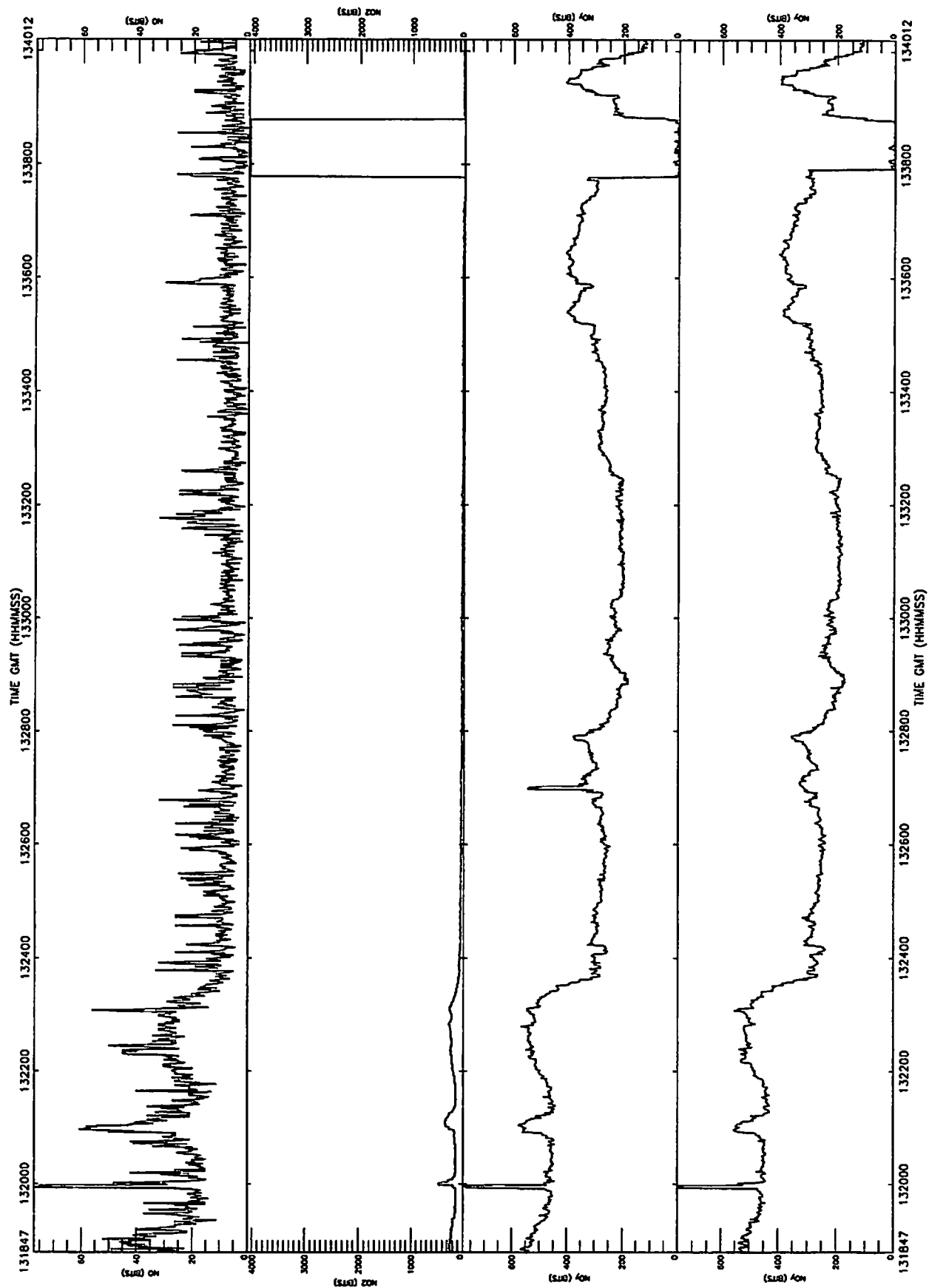
A571 18-AUG-97 P7 50'-5200' From 131847-134012 Plotted 11-Dec-1997 09:23



A571 18-AUG-97 P7 50'-5200' From 131847-134012 Plotted 11-Dec-1997 09:24



A571 18-AUG-97 P7 50'-5200' From 131847-134012 Plotted 11-Dec-1997 09:24



A571 18-AUG-97 P7 50'-5200' From 131847-134012 *Plotted 12-Dec-1997 14:38*

STATIC PRESSURE (MB)

No of obs 1286  
Mean 932.944  
Standard dev 66.4617  
Max value 1021.56  
Min value 846.146

DEICED TRUE TEMP (DEG K)

No of obs 1286  
Mean 291.010  
Standard dev 4.16930  
Max value 295.627  
Min value 284.844

DEW POINT (DEG K)

No of obs 1286  
Mean 285.366  
Standard dev 4.76898  
Max value 293.548  
Min value 273.167

OZONE MIXING RATIO (PPB)

No of obs 1286  
Mean 73.6261  
Standard dev 7.76434  
Max value 84.9424  
Min value 56.0856

PCASP CONCENTRATION (CM-3)

No of obs 1286  
Mean 1221.97  
Standard dev 494.857  
Max value 2628.87  
Min value 79.2886

FSSP CONCENTRATION (CM-3)

No of obs 1286  
Mean 4.535018e-02  
Standard dev 7.484096e-02  
Max value 0.238178  
Min value 0.000000

RADAR HEIGHT (METRES)

No of obs 1021  
Mean 608.686  
Standard dev 509.289  
Max value 1522.15  
Min value 14.1447

CORRECTED LATITUDE (DEGREES)

No of obs 1286  
Mean 54.9139  
Standard dev 0.120337  
Max value 55.1347  
Min value 54.7011

CORRECTED LONGITUDE (DEGREES)

No of obs 1286  
Mean 6.25194  
Standard dev 0.526864  
Max value 7.14976  
Min value 5.34293

NORTHWARD WIND COMPT (M S-1)

No of obs 1286  
Mean 2.36080  
Standard dev 1.54397  
Max value 4.38084  
Min value -0.652184

EASTWARD WIND COMPT (M S-1)

No of obs 1286  
Mean 0.678285  
Standard dev 1.55217  
Max value 3.10818  
Min value -2.11758

VERTICAL WIND COMPT (M S-1)

No of obs 1286  
Mean -0.147496  
Standard dev 0.390283  
Max value 1.12774  
Min value -1.09297

WIND SPEED (MS-1)

No of obs 1286  
Mean 3.01516  
Standard dev 1.31642  
Max value 5.32220  
Min value 9.361210e-02

WIND DIRECTION (DEG)

Mean 196.030

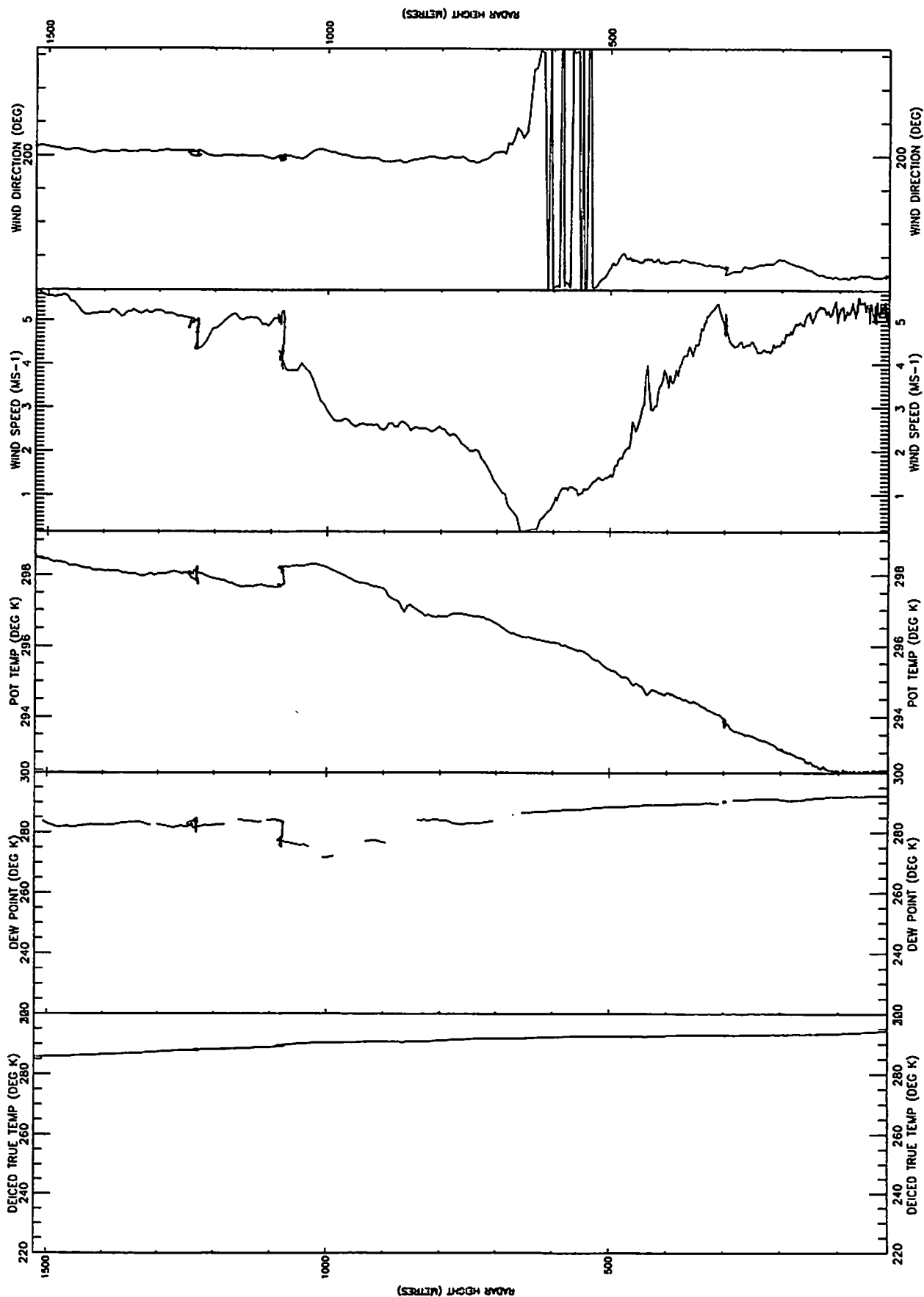
TRUE AIR SPEED (M S-1)

No of obs 1286  
Mean 99.0725  
Standard dev 2.77769  
Max value 103.651  
Min value 92.4818

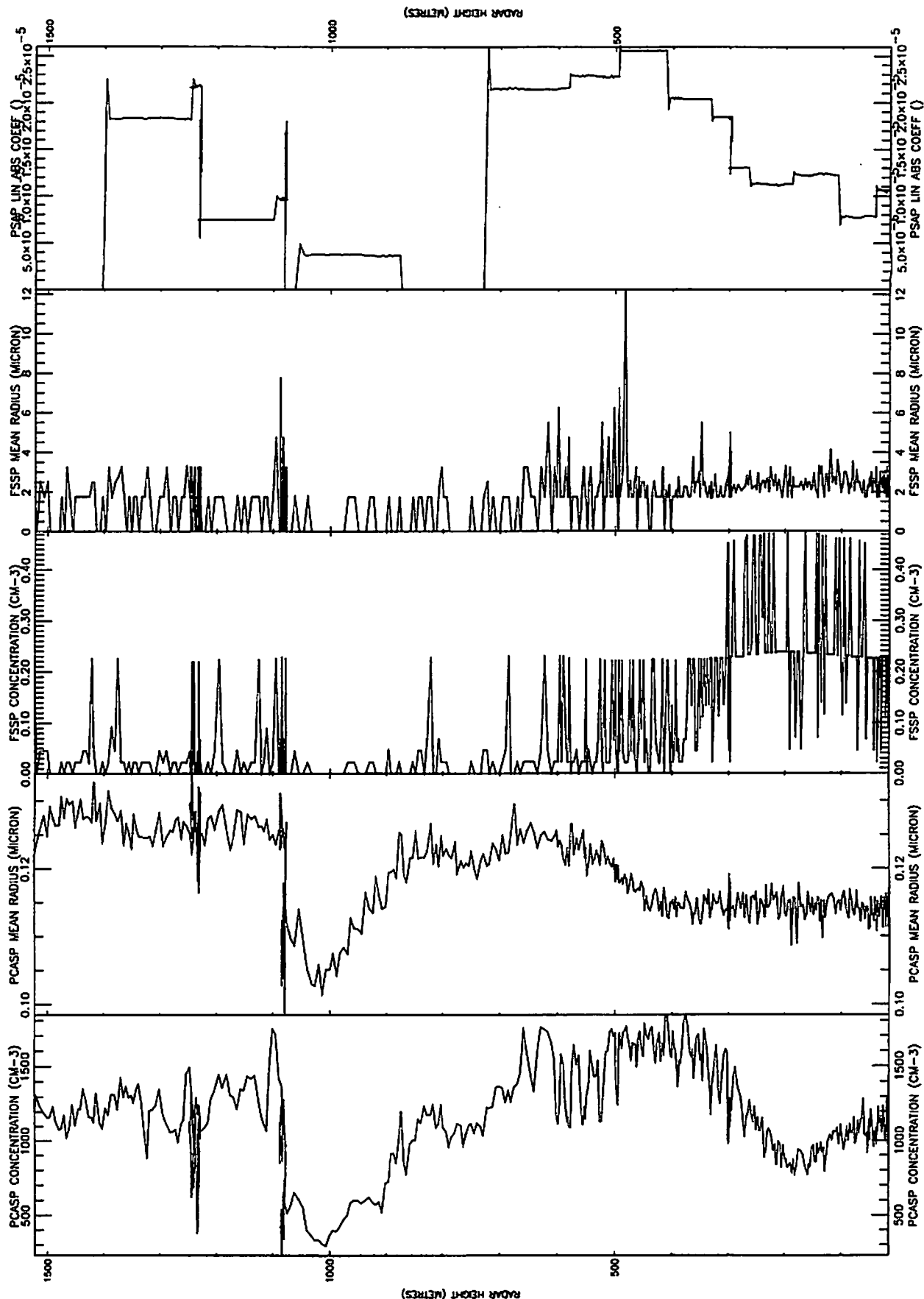
HEADING (DEG)

Mean 247.373

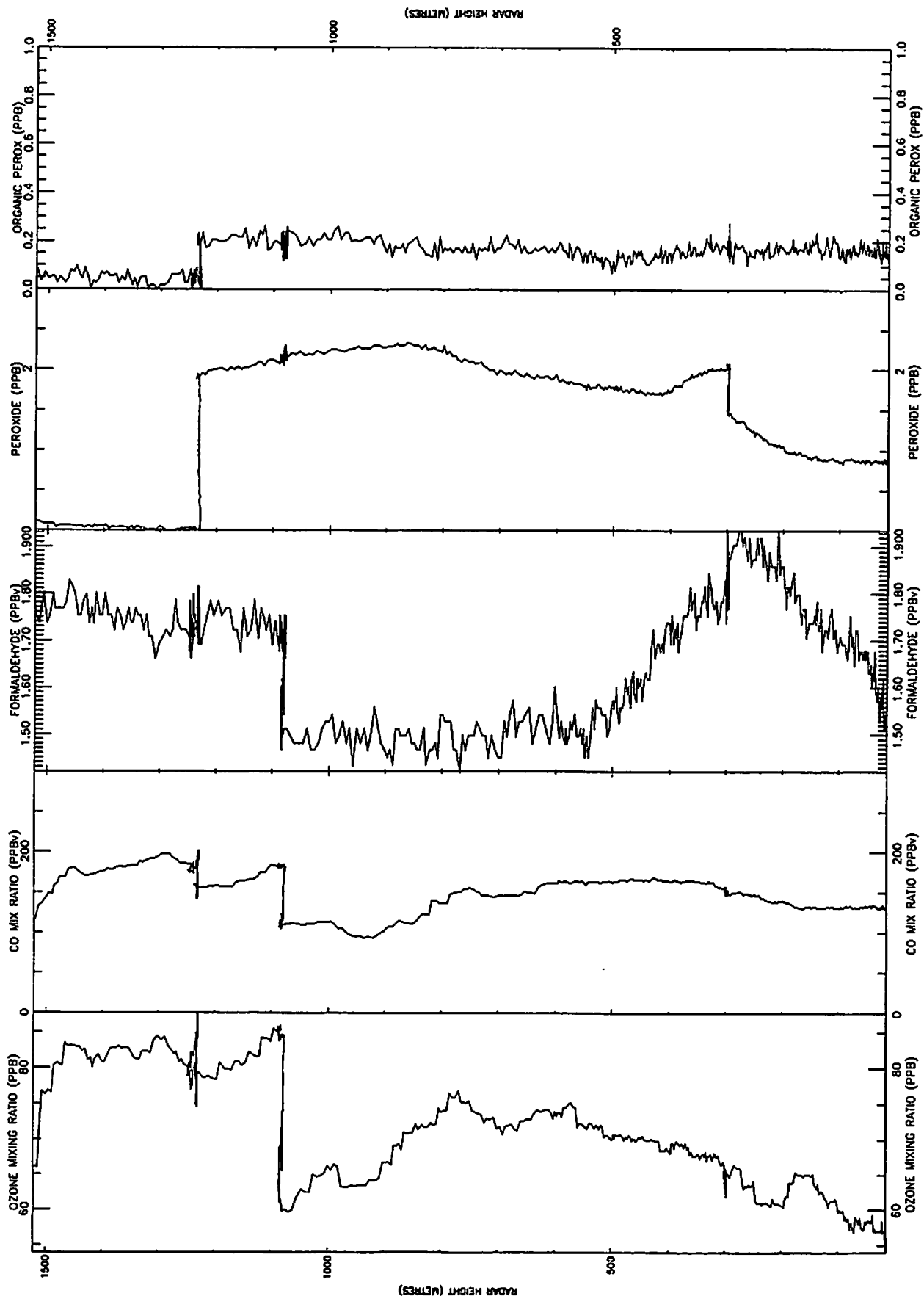
A571 18-AUG-97 P8 5200'-50' From 134012-135150 Plotted 11-Dec-1997 09:28



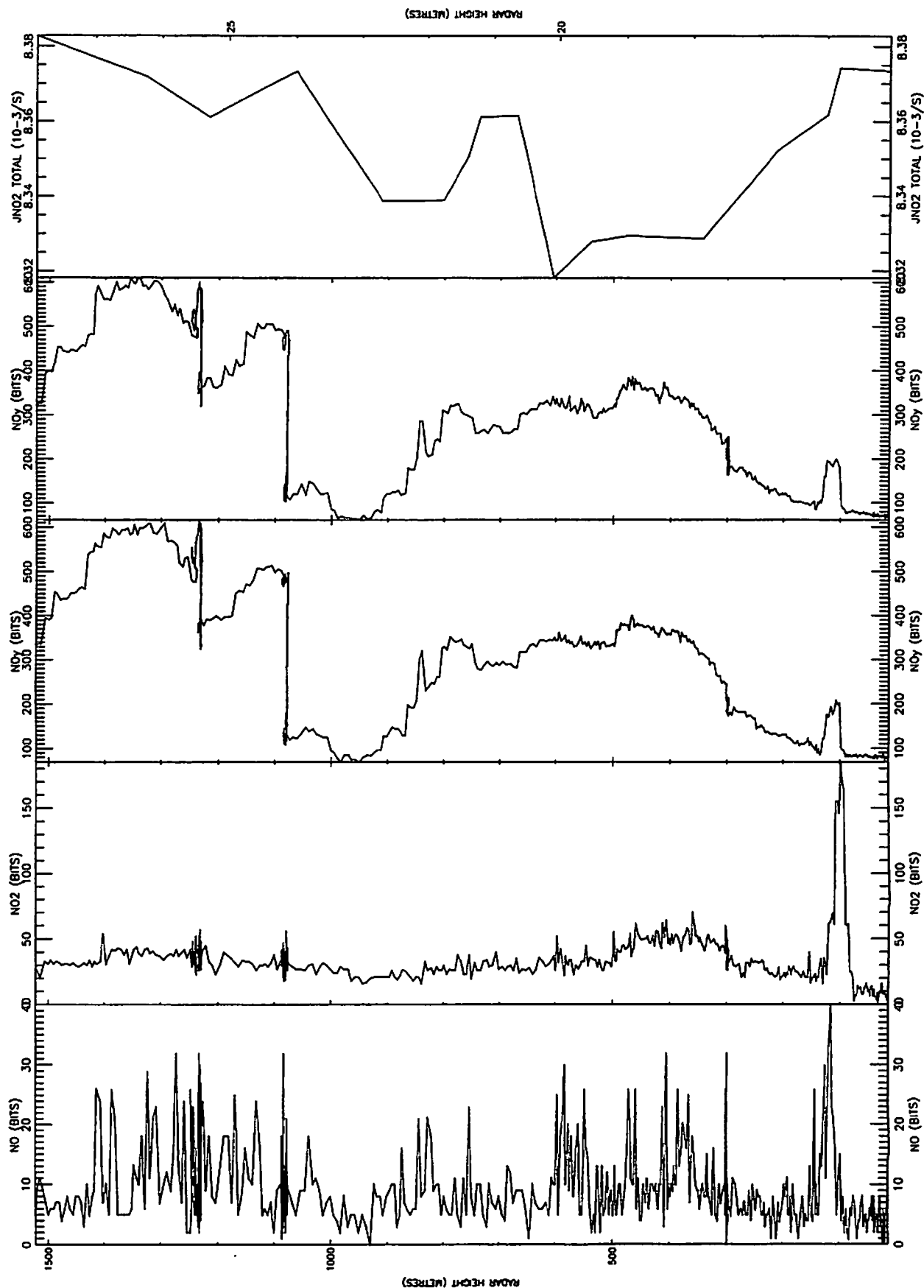
A571 18-AUG-97 P8 5200'-50' From 134012-135150 Plotted 12-Dec-1997 14:43



A571 18-AUG-97 P8 5200'-50' From 134012-135150 Plotted 11-Dec-1997 09:28

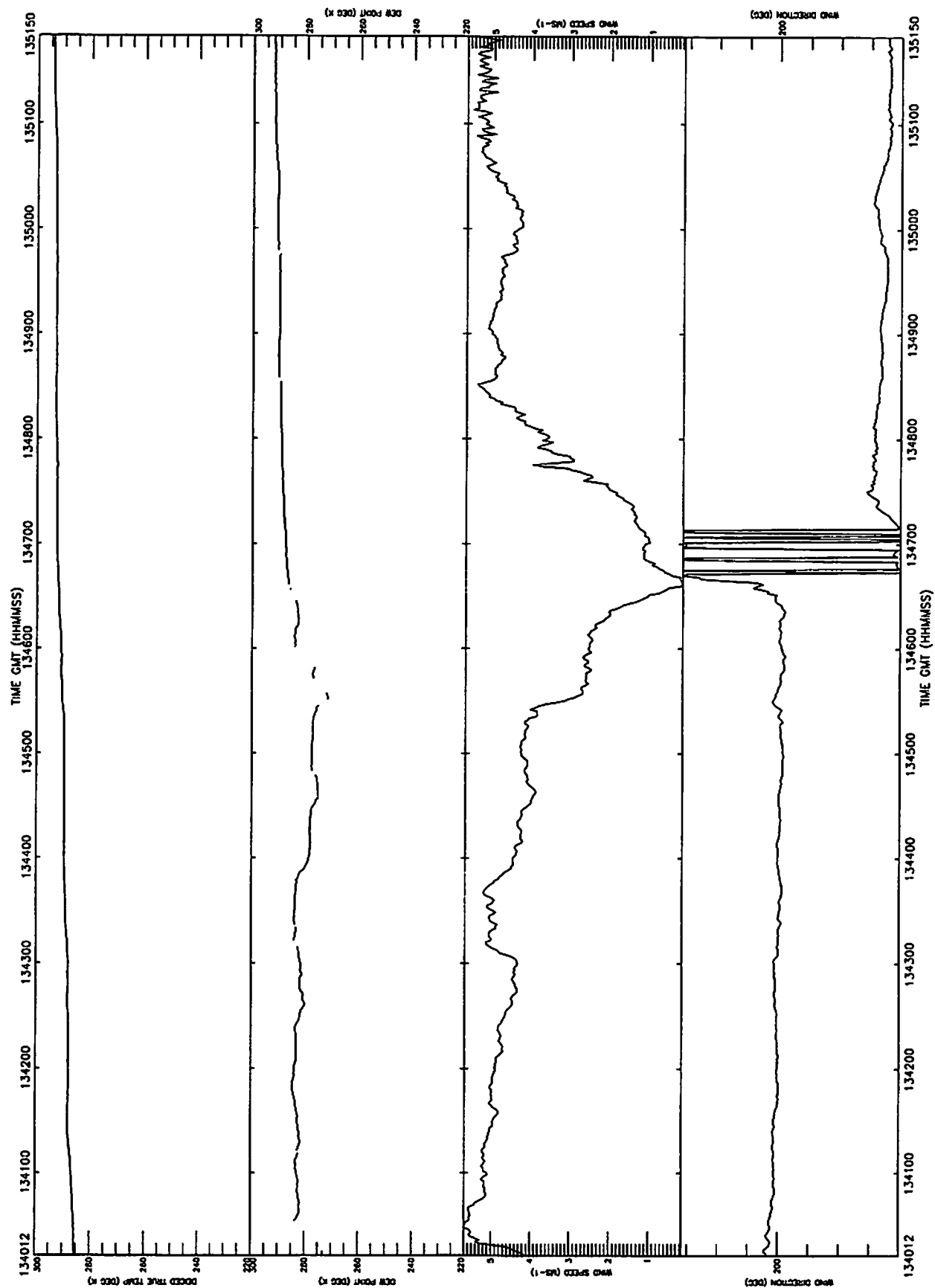


A571 18-AUG-97 P8 5200'-50' From 134012-135150 Plotted 11-Dec-1997 09:28

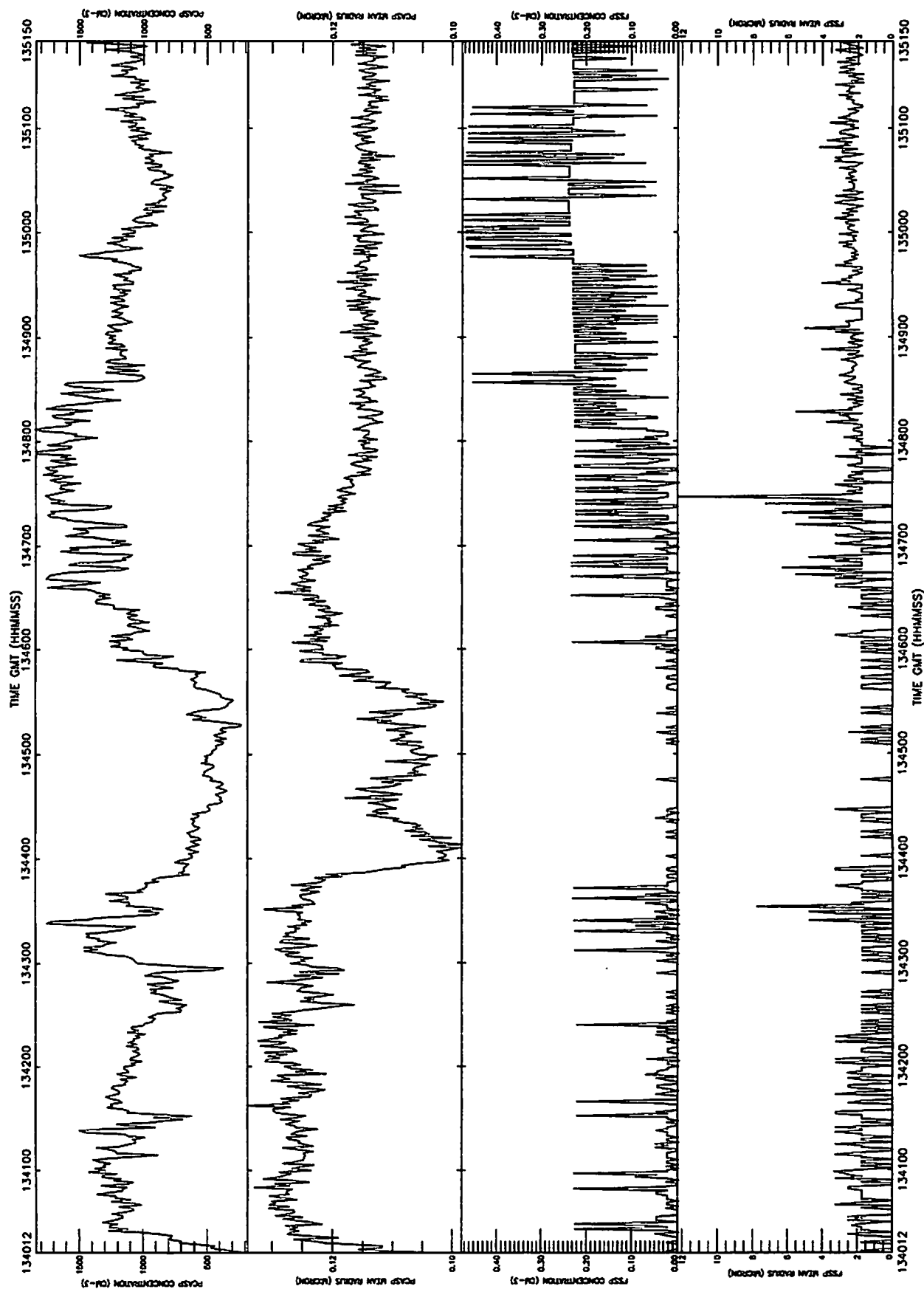




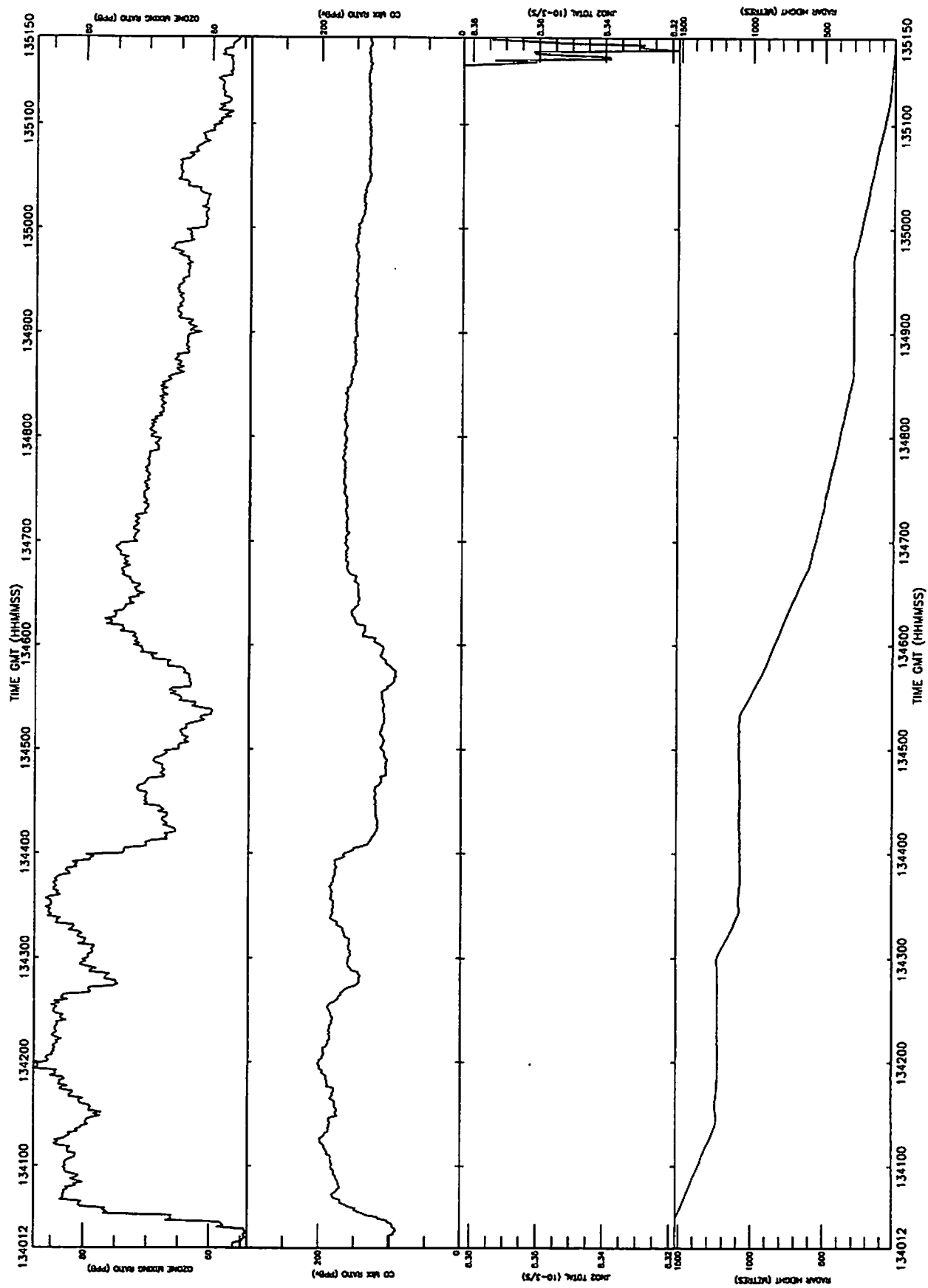
A571 18-AUG-97 P8 5200'-50' From 134012-135150 Plotted 11-Dec-1997 09:28



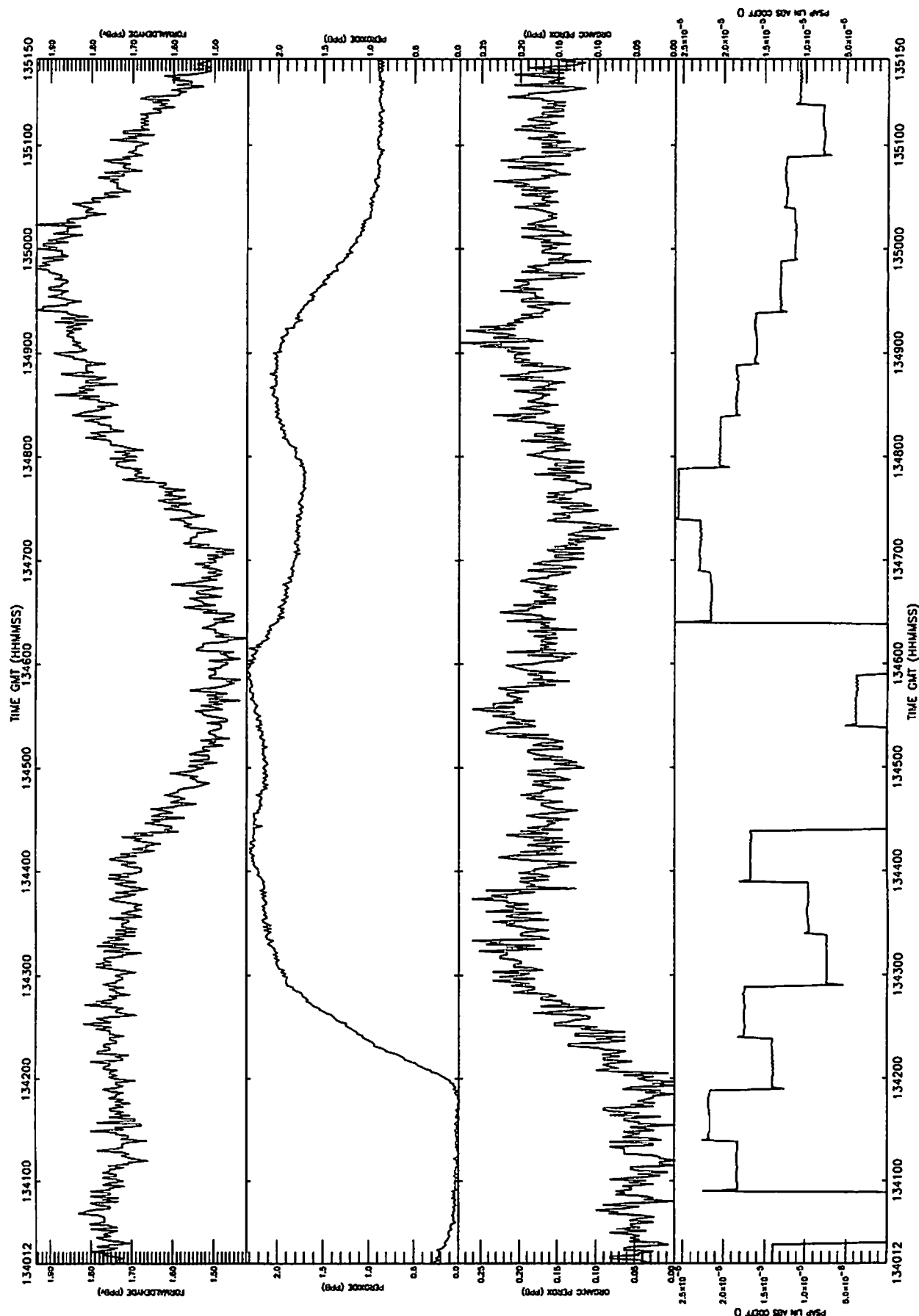
A571 18-AUG-97 P8 5200'-50' From 134012-135150 Plotted 12-Dec-1997 14:43



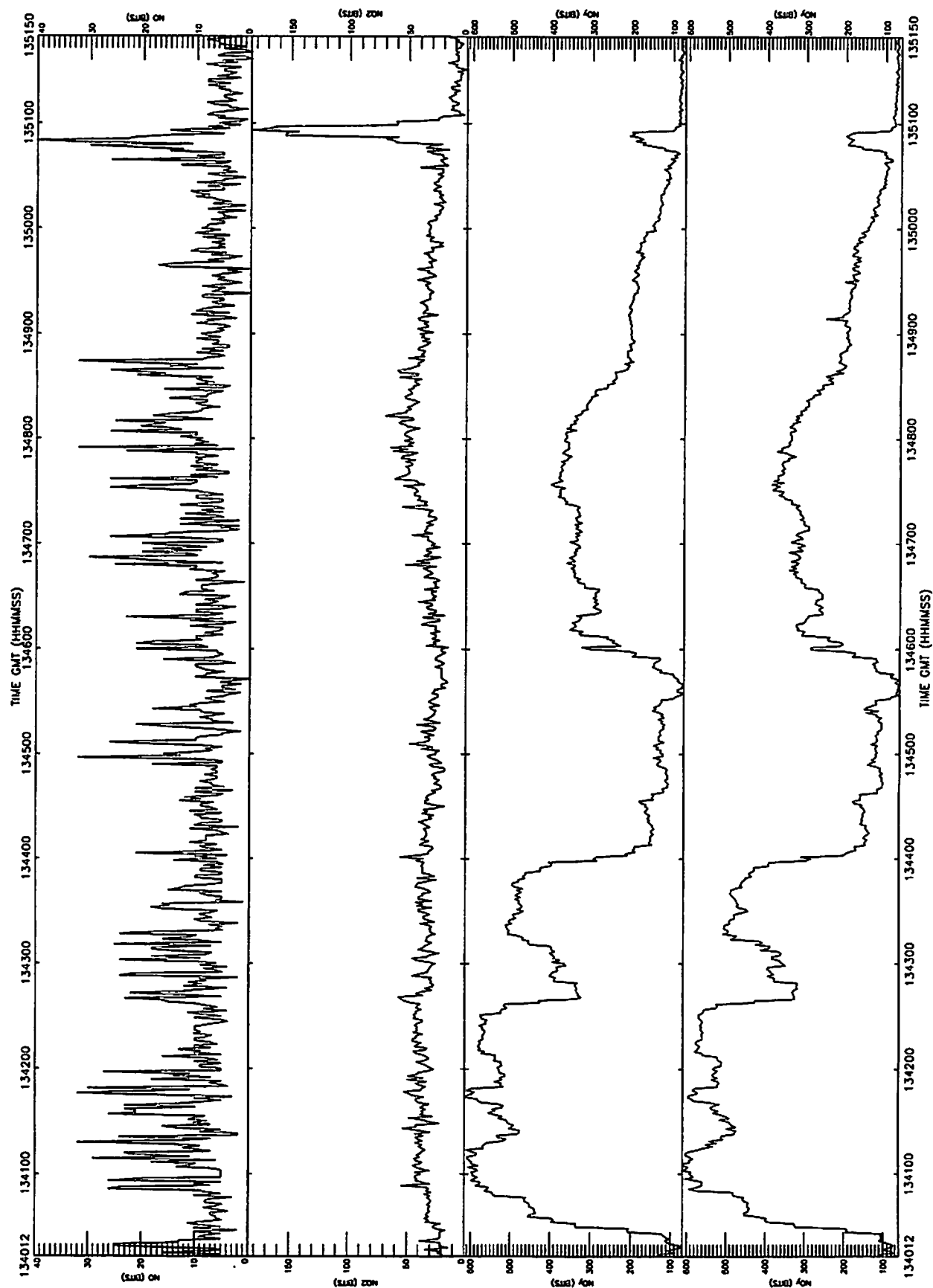
A571 18-AUG-97 P8 5200'-50' From 134012-135150 Plotted 11-Dec-1997 09:28



A571 18-AUG-97 P8 5200'-50' From 134012-135150 Plotted 11-Dec-1997 09:28



A571 18-AUG-97 P8 5200'-50' From 134012-135150 Plotted 11-Dec-1997 09:28



A571 18-AUG-97 P8 5200'-50' From 134012-135150 *Plotted 12-Dec-1997 14:43*

STATIC PRESSURE (MB)

No of obs 699  
Mean 938.640  
Standard dev 50.4803  
Max value 1021.46  
Min value 846.910

DEICED TRUE TEMP (DEG K)

No of obs 699  
Mean 290.696  
Standard dev 2.43286  
Max value 294.246  
Min value 285.555

DEW POINT (DEG K)

No of obs 699  
Mean 285.036  
Standard dev 5.34484  
Max value 292.439  
Min value 271.800

OZONE MIXING RATIO (PPB)

No of obs 699  
Mean 70.6960  
Standard dev 8.68804  
Max value 87.6796  
Min value 53.9484

PCASP CONCENTRATION (CM-3)

No of obs 699  
Mean 1080.53  
Standard dev 351.203  
Max value 1837.18  
Min value 181.413

FSSP CONCENTRATION (CM-3)

No of obs 699  
Mean 9.162335e-02  
Standard dev 0.117397  
Max value 0.476372  
Min value 0.000000

RADAR HEIGHT (METRES)

No of obs 693  
Mean 754.499  
Standard dev 457.757  
Max value 1522.15  
Min value 15.0739

CORRECTED LATITUDE (DEGREES)

No of obs 699  
Mean 54.5852  
Standard dev 6.920141e-02  
Max value 54.7011  
Min value 54.4613

CORRECTED LONGITUDE (DEGREES)

No of obs 699  
Mean 4.85817  
Standard dev 0.282377  
Max value 5.34293  
Min value 4.36772

NORTHWARD WIND COMPT (M S-1)

No of obs 699  
Mean 0.620869  
Standard dev 3.86928  
Max value 5.05405  
Min value -5.12530

EASTWARD WIND COMPT (M S-1)

No of obs 699  
Mean -2.326223e-02  
Standard dev 1.94312  
Max value 3.50170  
Min value -3.21188

VERTICAL WIND COMPT (M S-1)

No of obs 699  
Mean 0.653829  
Standard dev 0.224385  
Max value 1.21224  
Min value -0.140137

WIND SPEED (MS-1)

No of obs 699  
Mean 4.17833  
Standard dev 1.28457  
Max value 5.69370  
Min value 0.158629

WIND DIRECTION (DEG)

Mean 177.854

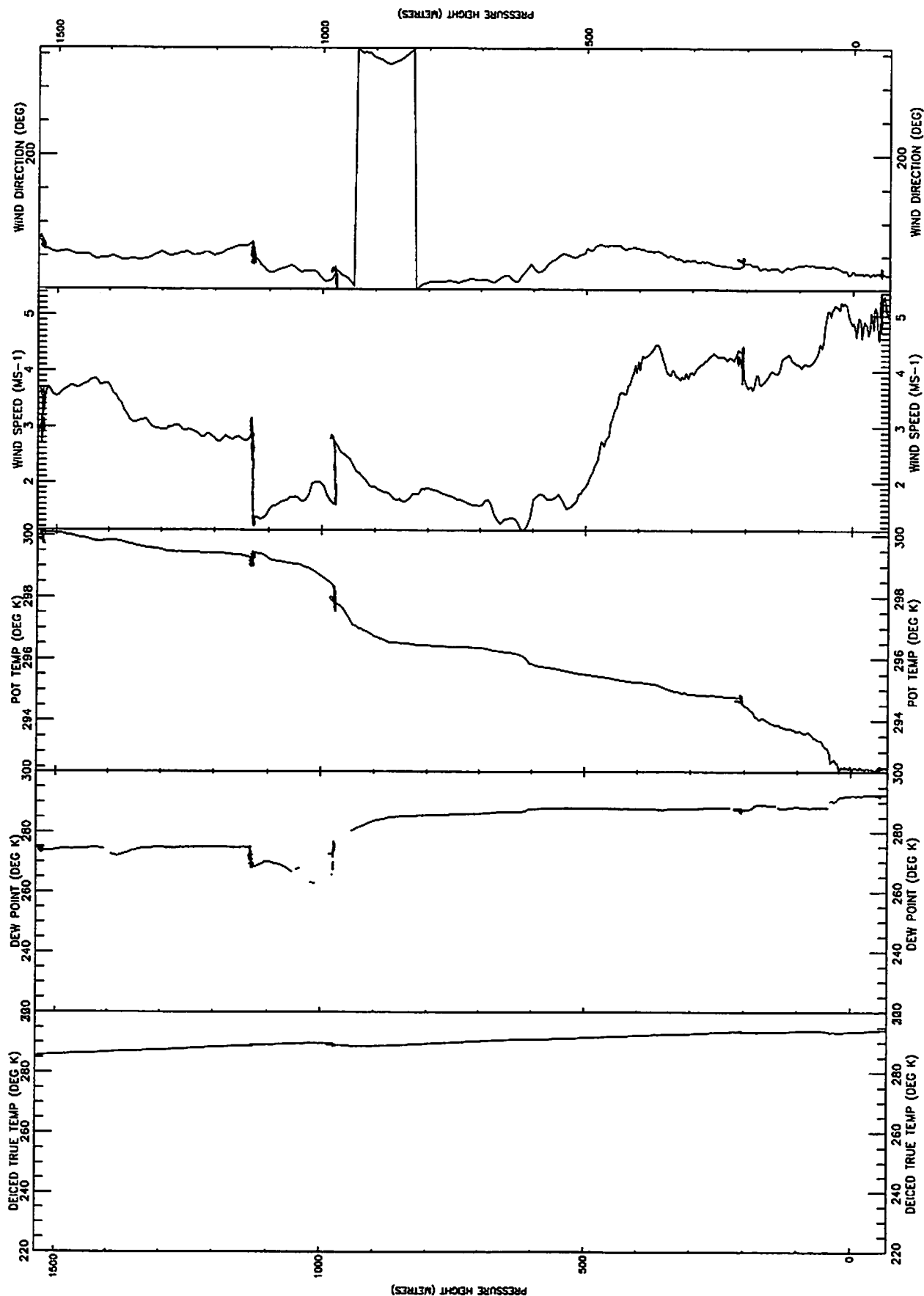
TRUE AIR SPEED (M S-1)

No of obs 699  
Mean 98.0674  
Standard dev 2.01647  
Max value 101.474  
Min value 92.6068

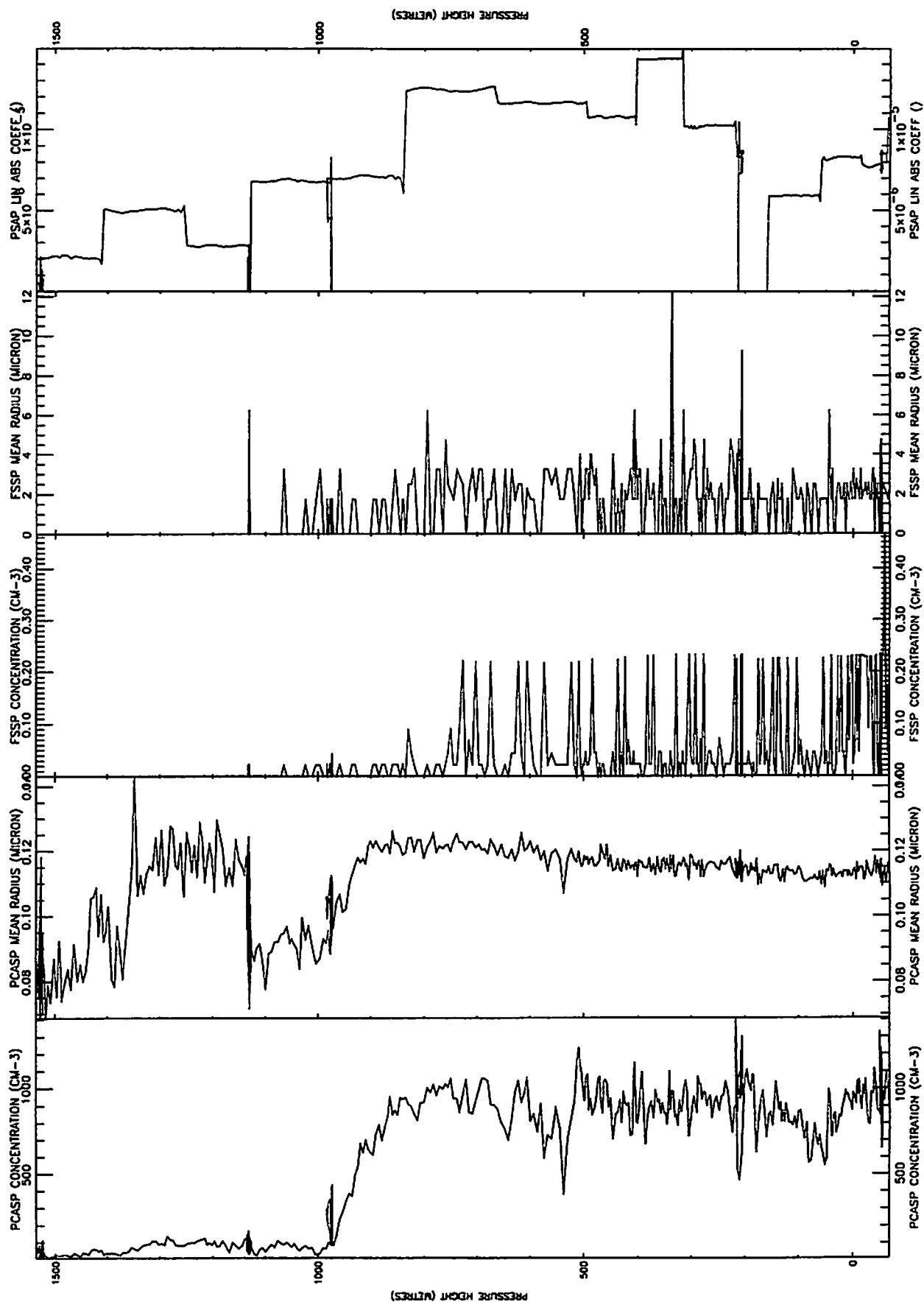
HEADING (DEG)

Mean 247.038

A571 18-AUG-97 P9 50'-5300' From 135150-141655 Plotted 11-Dec-1997 09:43

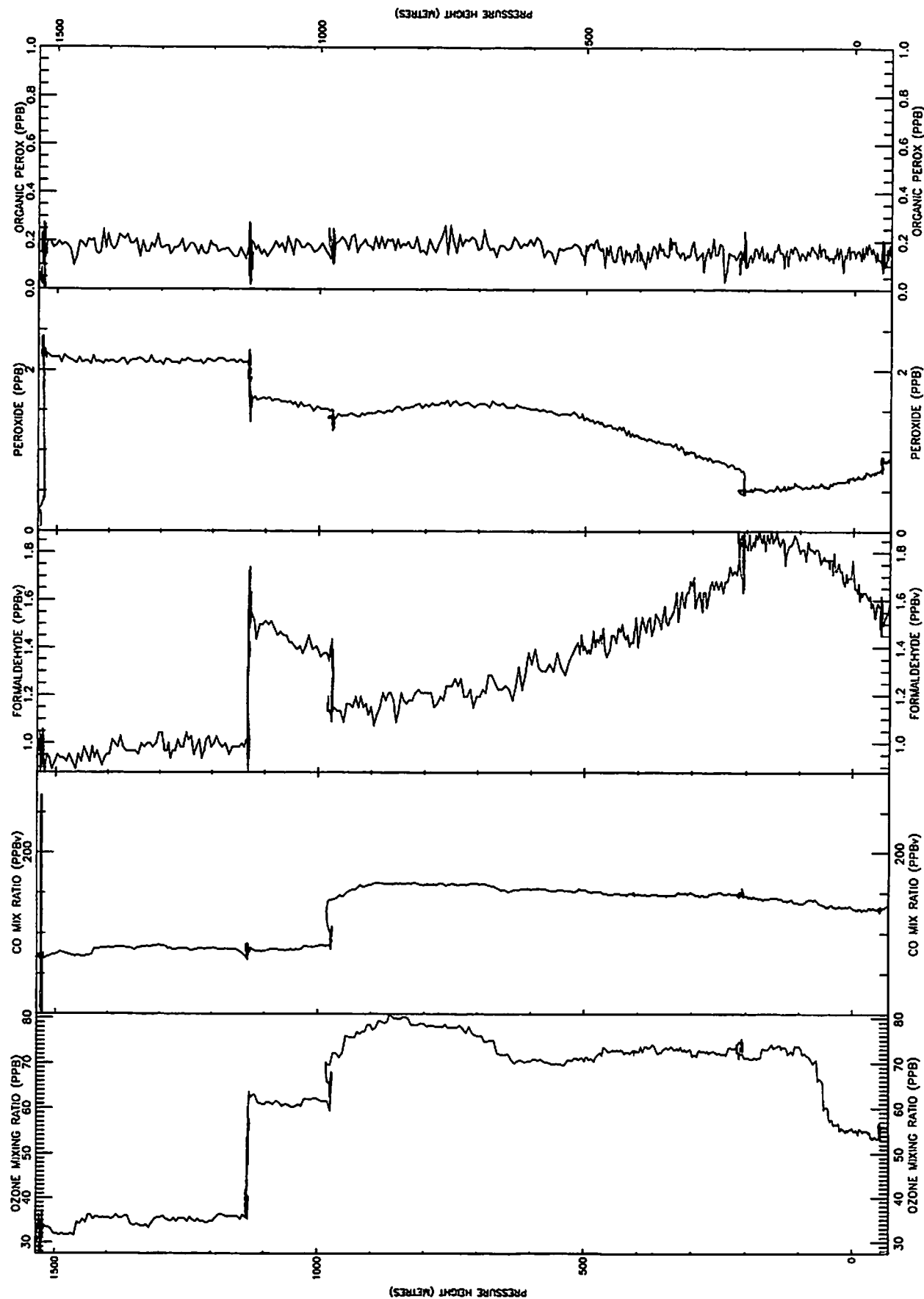


A571 18-AUG-97 P9 50'-5300' From 135150-141655 Plotted 12-Dec-1997 14:51

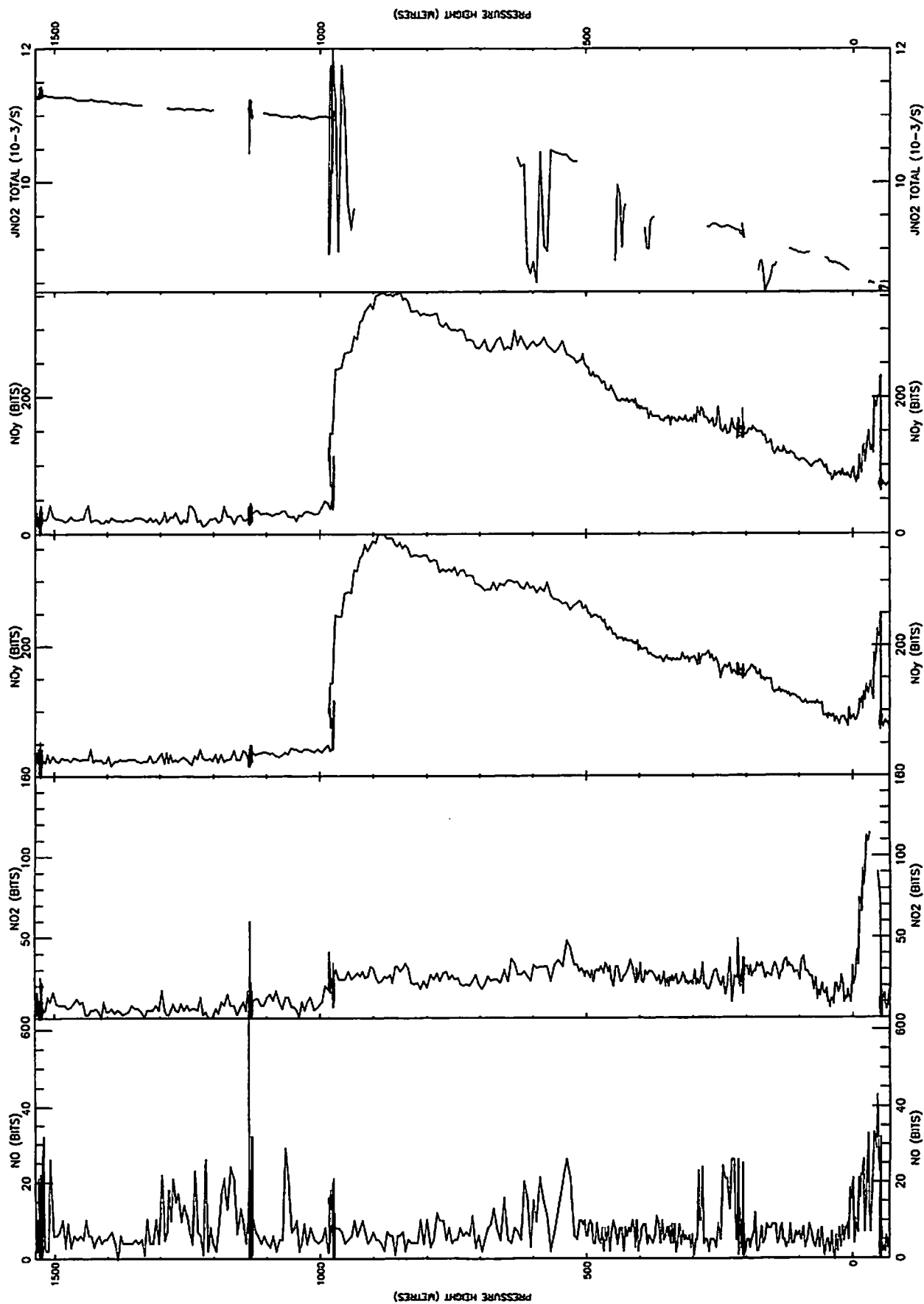




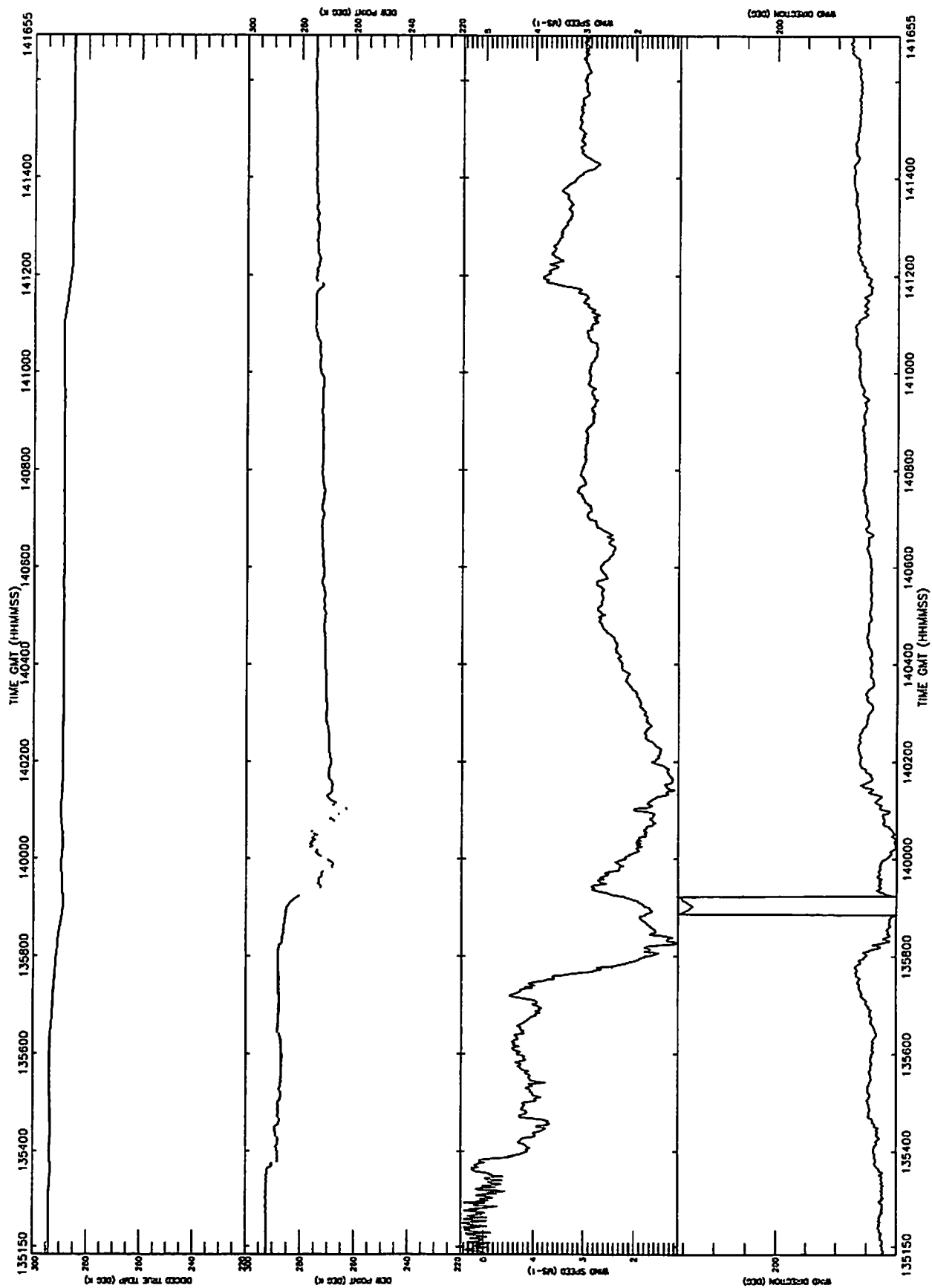
A571 18-AUG-97 P9 50'-5300' From 135150-141655 Plotted 11-Dec-1997 09:43



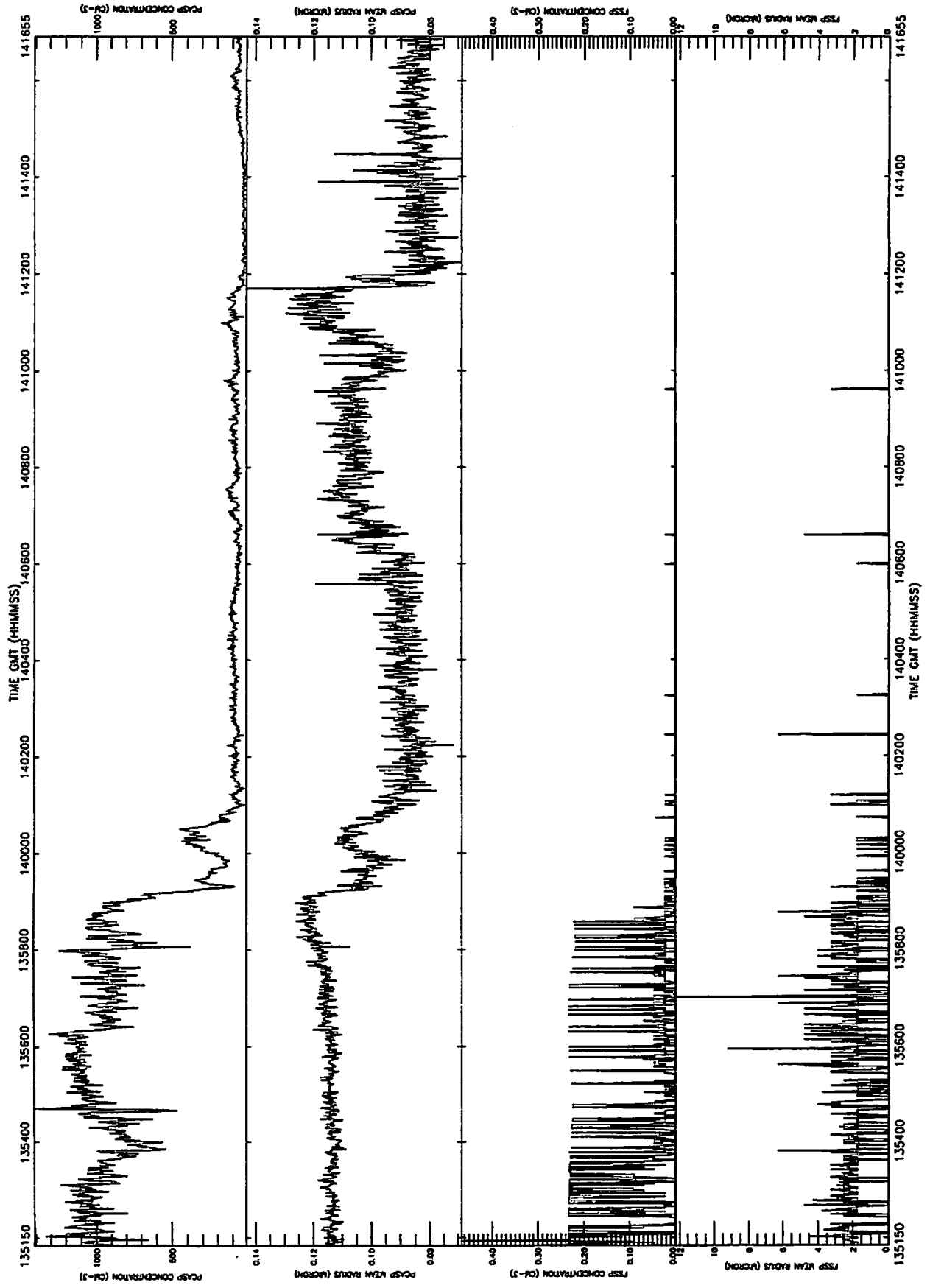
A571 18-AUG-97 P9 50'-5300' From 135150-141655 Plotted 11-Dec-1997 15:09



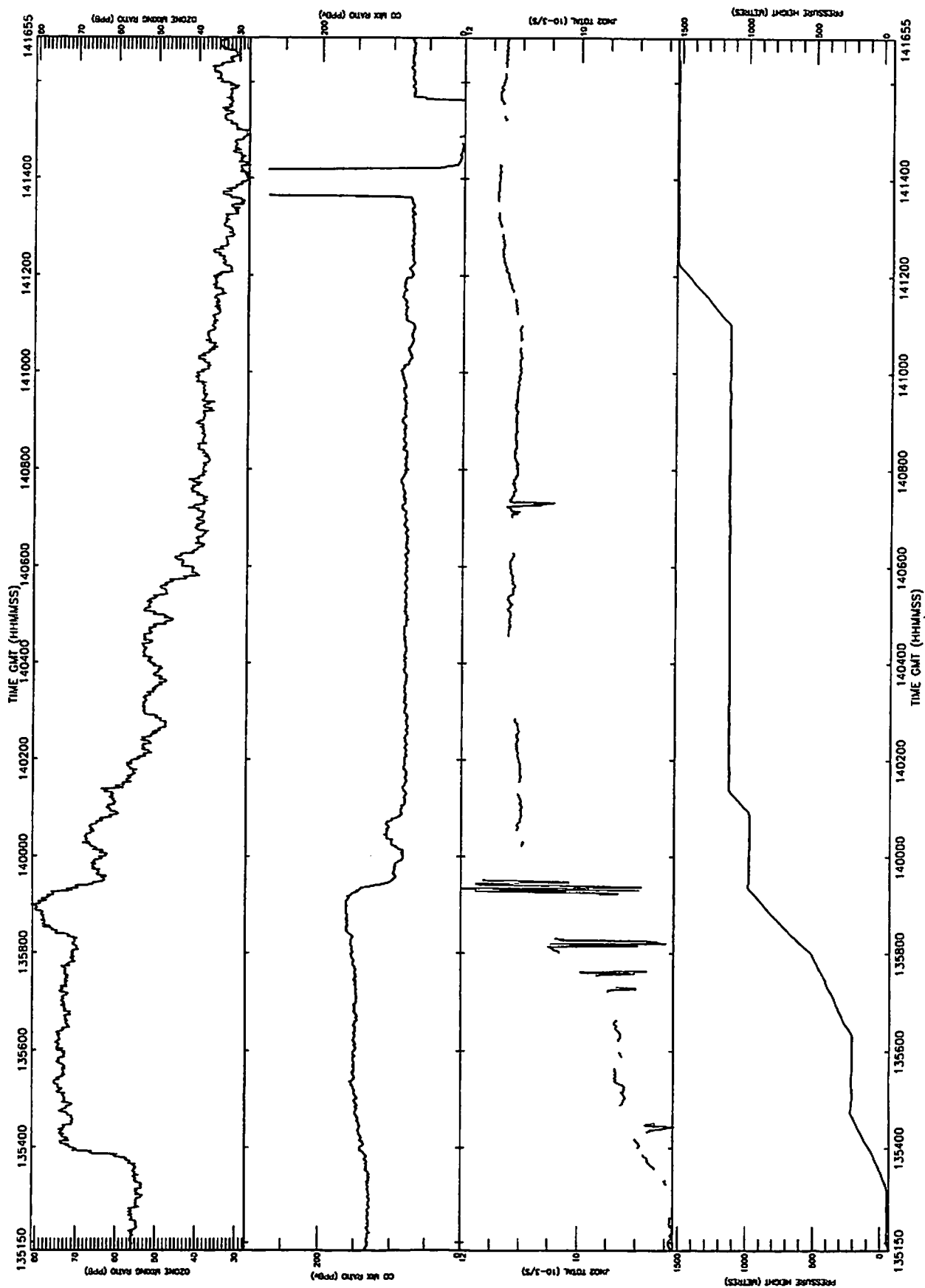
A571 18-AUG-97 P9 50'-5300' From 135150-141655 Plotted 11-Dec-1997 09:43



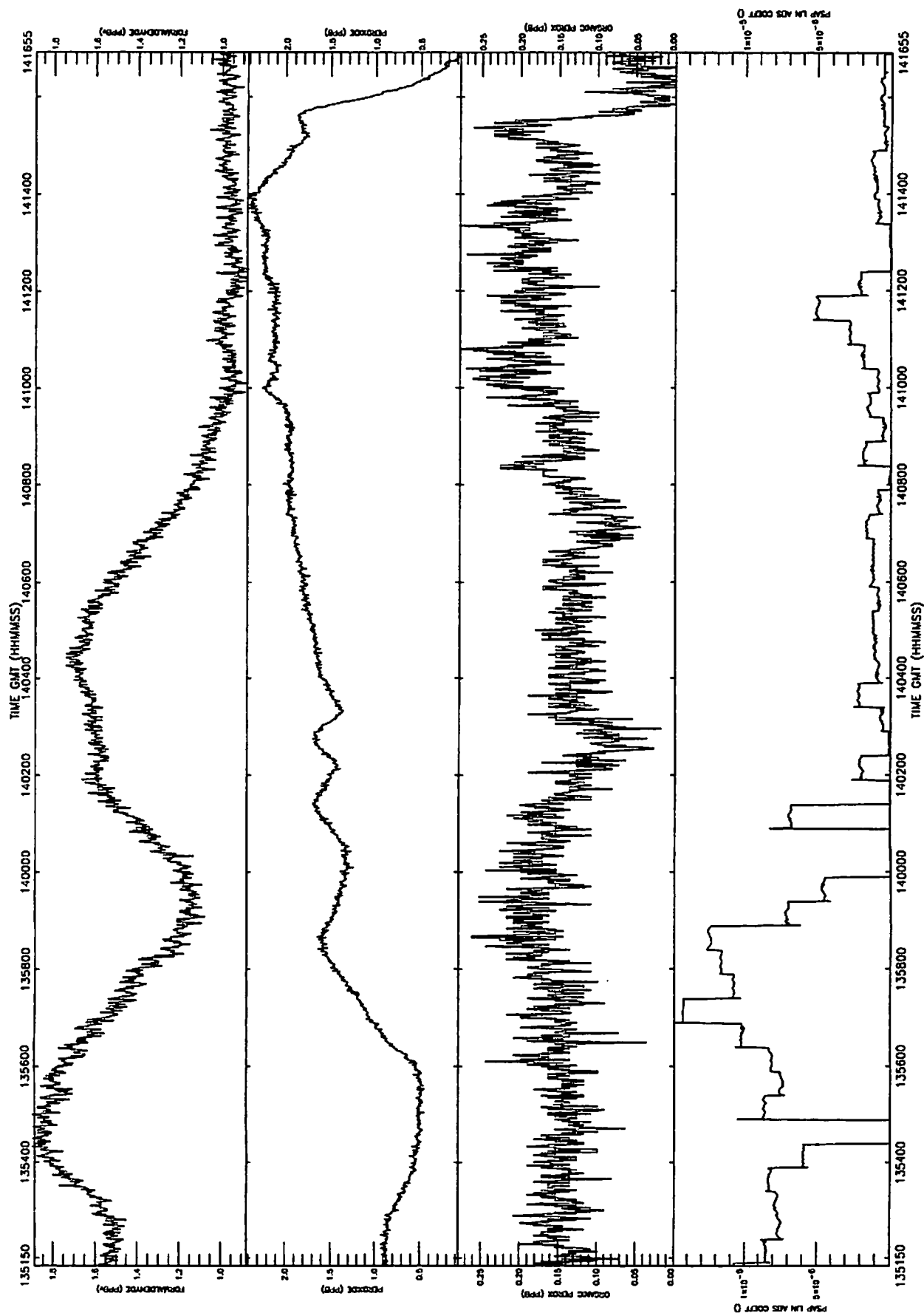
A571 18-AUG-97 P9 50'-5300' From 135150-141655 Plotted 12-Dec-1997 14:51



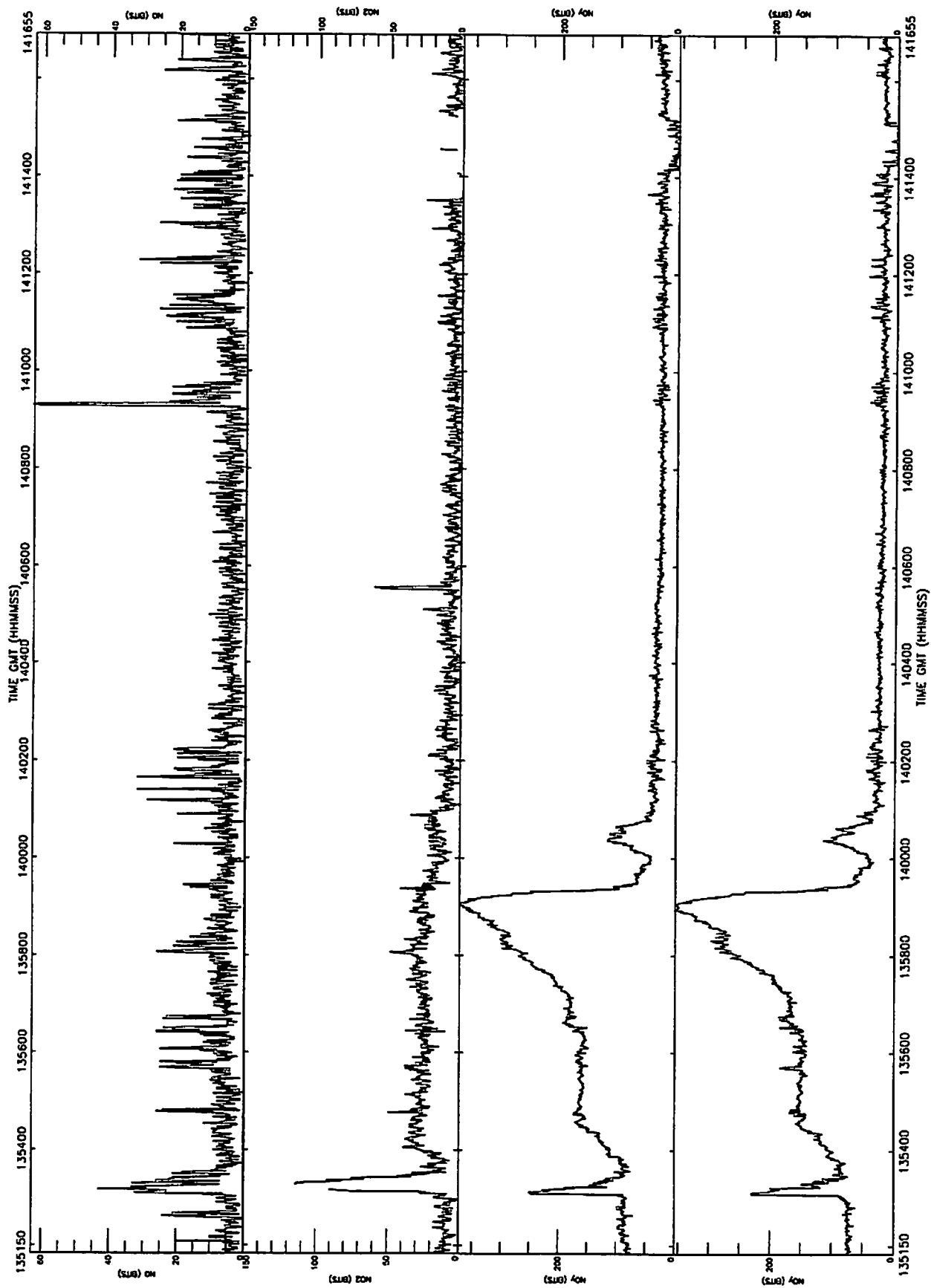
A571 18-AUG-97 P9 50'-5300' From 135150-141655 Plotted 11-Dec-1997 09:44



A571 18-AUG-97 P9 50'-5300' From 135150-141655 Plotted 11-Dec-1997 09:44



A571 18-AUG-97 P9 50'-5300' From 135150-141655 Plotted 11-Dec-1997 15:10



A571 18-AUG-97 P9 50'-5300' From 135150-141655 *Plotted 12-Dec-1997 14:52*

STATIC PRESSURE (MB)

No of obs 1506  
Mean 906.179  
Standard dev 55.3748  
Max value 1021.49  
Min value 841.821

DEICED TRUE TEMP (DEG K)

No of obs 1506  
Mean 289.419  
Standard dev 2.69121  
Max value 294.259  
Min value 285.475

DEW POINT (DEG K)

No of obs 1506  
Mean 277.249  
Standard dev 7.66829  
Max value 292.551  
Min value 262.976

OZONE MIXING RATIO (PPB)

No of obs 1506  
Mean 50.5714  
Standard dev 15.5667  
Max value 80.8987  
Min value 27.5023

PCASP CONCENTRATION (CM-3)

No of obs 1506  
Mean 346.361  
Standard dev 411.089  
Max value 1409.13  
Min value 10.0010

FSSP CONCENTRATION (CM-3)

No of obs 1506  
Mean 1.969061e-02  
Standard dev 5.624673e-02  
Max value 0.466327  
Min value 0.000000

PRESSURE HEIGHT (METRES)

No of obs 1506  
Mean 944.166  
Standard dev 495.584  
Max value 1536.07  
Min value -68.3368

CORRECTED LATITUDE (DEGREES)

No of obs 1506  
Mean 54.0747  
Standard dev 0.220884  
Max value 54.4613  
Min value 53.7551

CORRECTED LONGITUDE (DEGREES)

No of obs 1506  
Mean 3.40959  
Standard dev 0.560931  
Max value 4.36772  
Min value 2.36998

NORTHWARD WIND COMPT (M S-1)

No of obs 1506  
Mean -1.95944  
Standard dev 1.00632  
Max value -0.528160  
Min value -5.01066

EASTWARD WIND COMPT (M S-1)

No of obs 1506  
Mean -2.12746  
Standard dev 0.846104  
Max value 0.748901  
Min value -3.79613

VERTICAL WIND COMPT (M S-1)

No of obs 1506  
Mean -0.133962  
Standard dev 0.423995  
Max value 0.892494  
Min value -1.53027

WIND SPEED (MS-1)

No of obs 1506  
Mean 3.02290  
Standard dev 0.977576  
Max value 5.45474  
Min value 1.13579

WIND DIRECTION (DEG)

Mean 47.3542

TRUE AIR SPEED (M S-1)

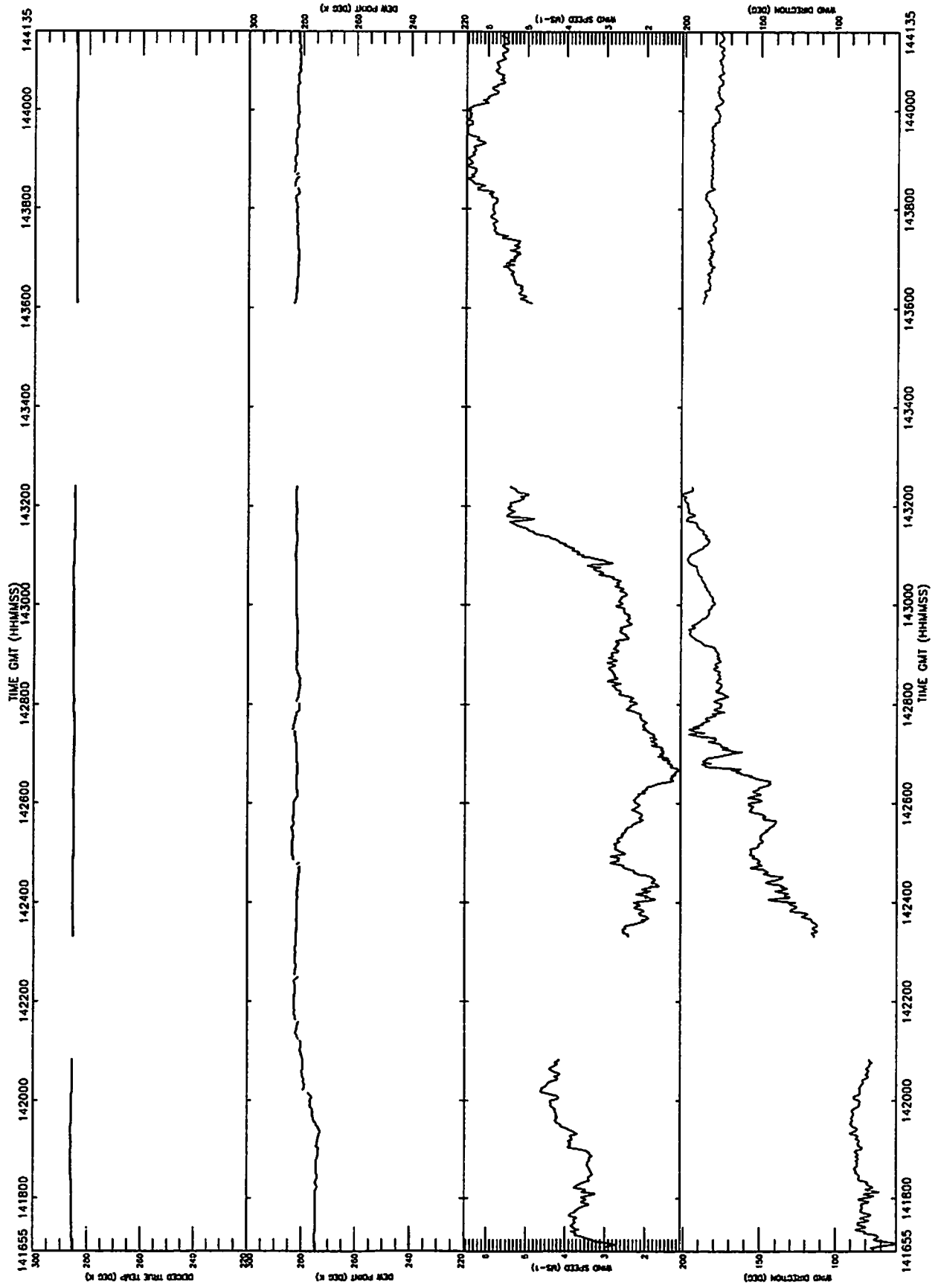
No of obs 1506  
Mean 99.7728  
Standard dev 2.62634  
Max value 105.948  
Min value 94.3568

HEADING (DEG)

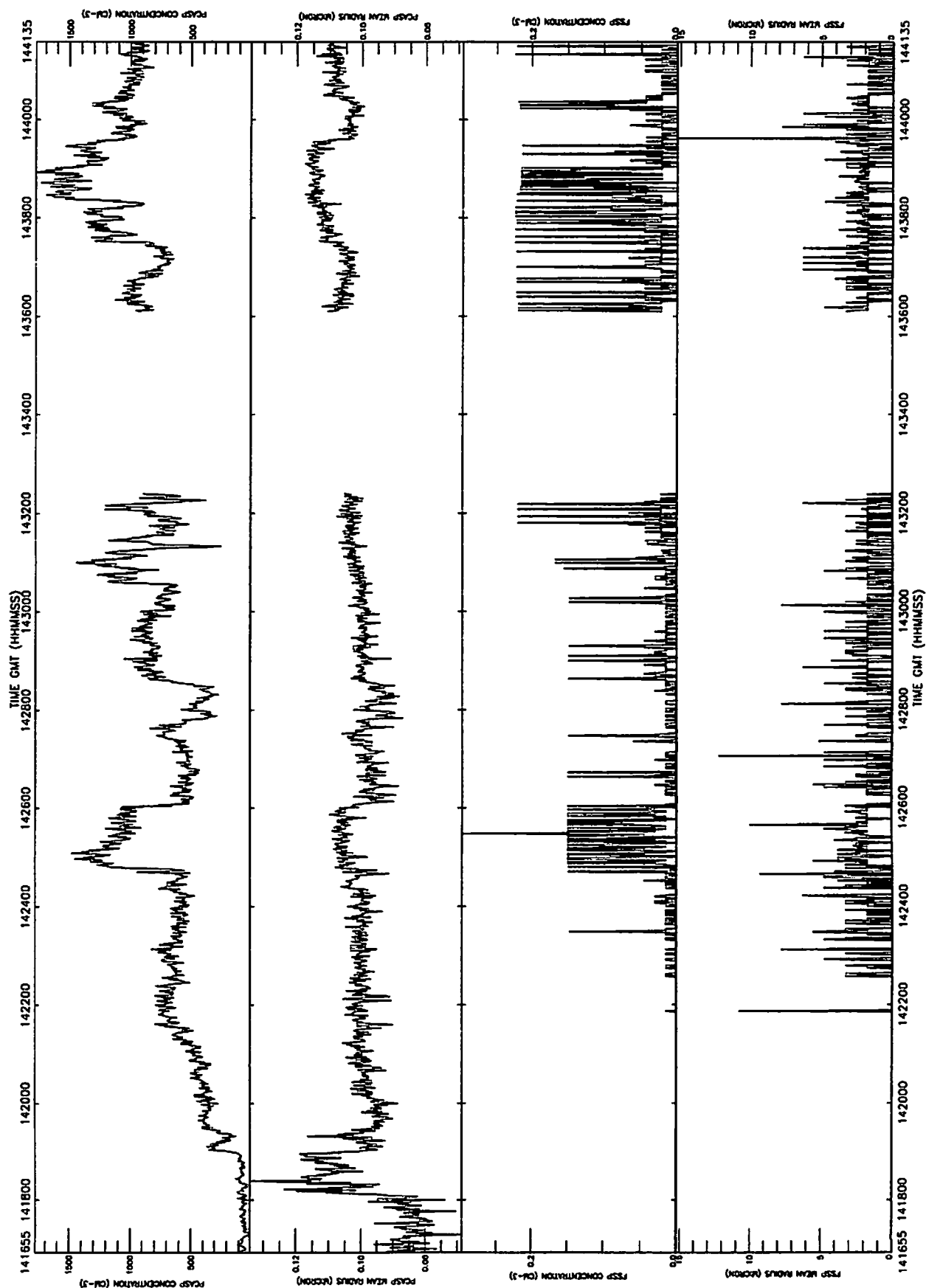
Mean 239.000



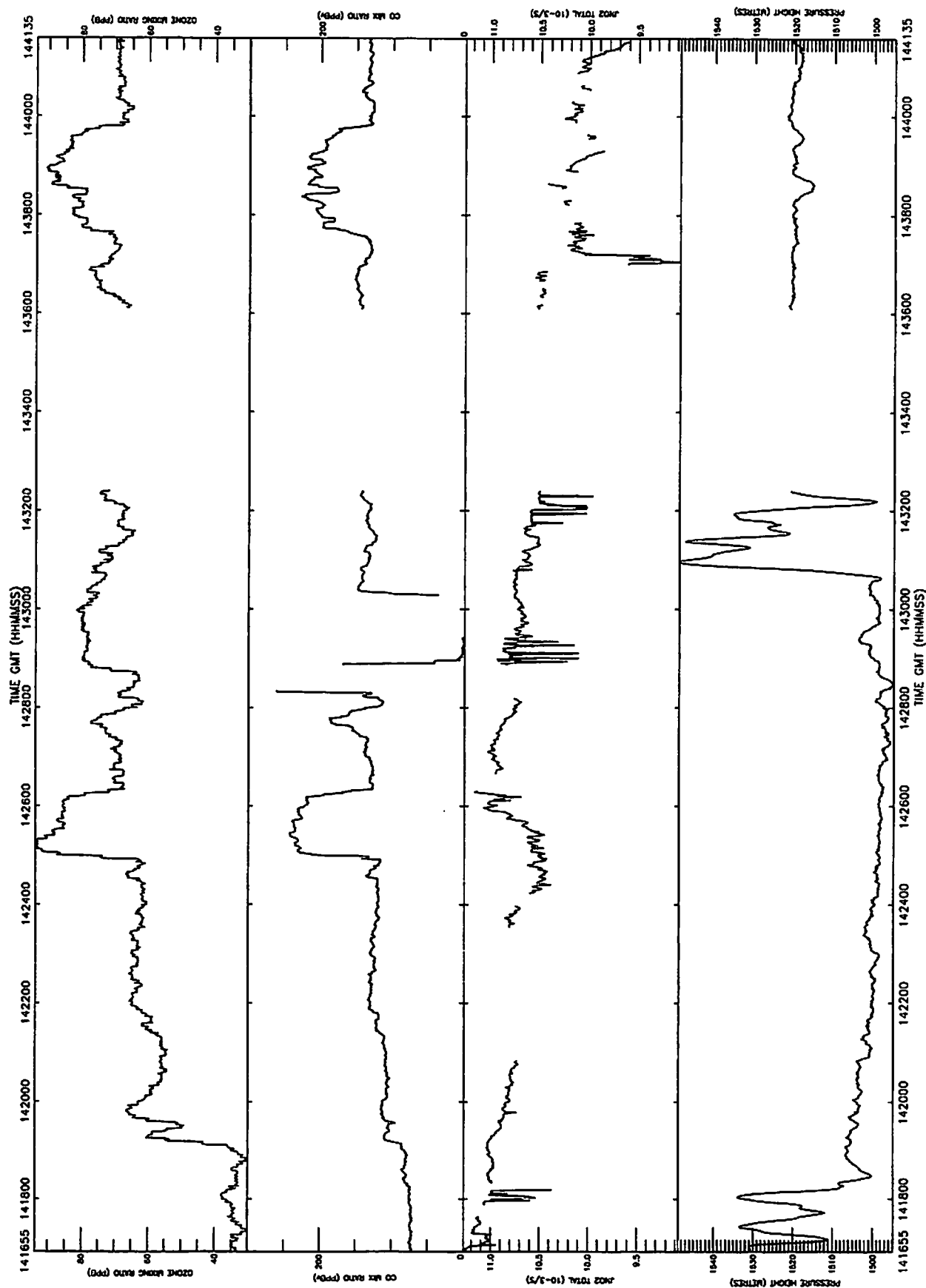
A571 18-AUG-97 transit 5300' From 141655-144135 Plotted 11-Dec-1997 09:54



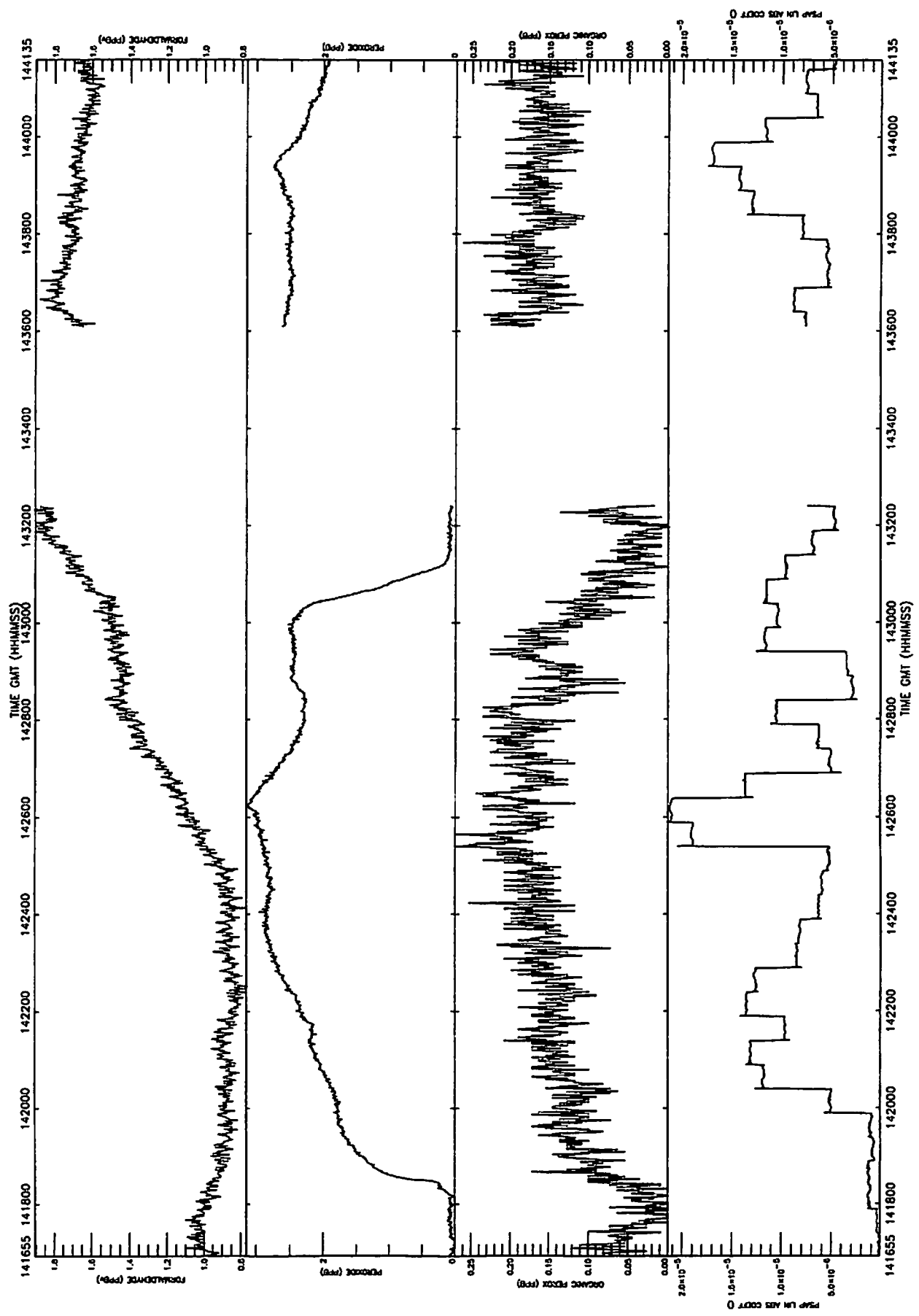
A571 18-AUG-97 transit 5300' From 141655-144135 Plotted 12-Dec-1997 15:01



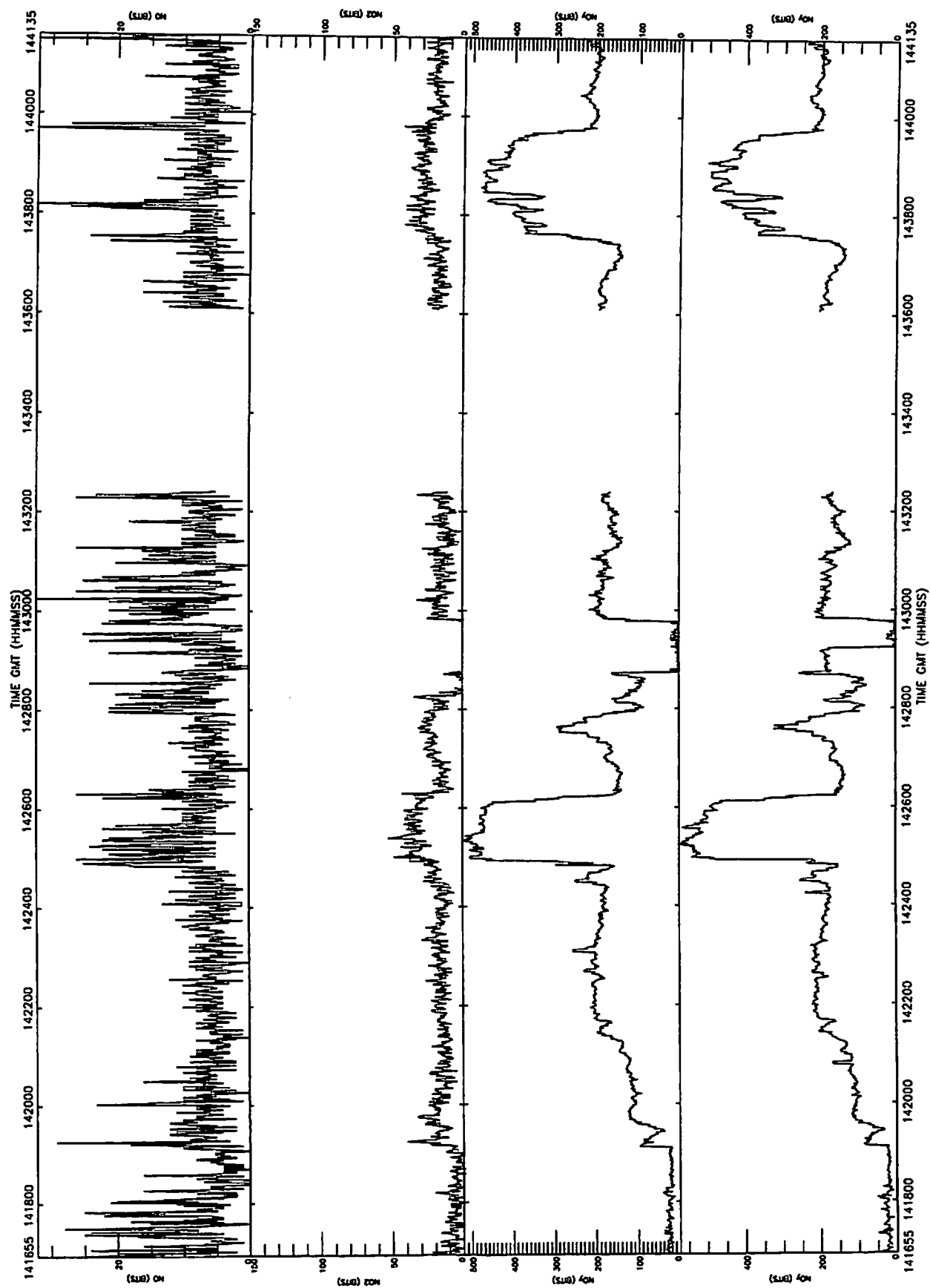
A571 18-AUG-97 transit 5300' From 141655-144135 Plotted 11-Dec-1997 09:54



A571 18-AUG-97 transit 5300' From 141655-144135 Plotted 11-Dec-1997 09:54



A571 18-AUG-97 transit 5300' From 141655-144135 Plotted 11-Dec-1997 15:15



A571 18-AUG-97 transit 5300' From 141655-144135 *Plotted 12-Dec-1997 15:01*

STATIC PRESSURE (MB)

No of obs 1260  
Mean 844.618  
Standard dev 1.21733  
Max value 846.089  
Min value 840.504

DEICED TRUE TEMP (DEG K)

No of obs 1260  
Mean 285.140  
Standard dev 0.456561  
Max value 286.175  
Min value 284.290

DEW POINT (DEG K)

No of obs 1260  
Mean 280.822  
Standard dev 2.72566  
Max value 283.831  
Min value 272.982

OZONE MIXING RATIO (PPB)

No of obs 1260  
Mean 66.6094  
Standard dev 14.2419  
Max value 93.8742  
Min value 30.1451

PCASP CONCENTRATION (CM-3)

No of obs 1260  
Mean 725.622  
Standard dev 369.346  
Max value 1784.04  
Min value 9.00058

FSSP CONCENTRATION (CM-3)

No of obs 1260  
Mean 2.314857e-02  
Standard dev 4.952032e-02  
Max value 0.297333  
Min value 0.000000

PRESSURE HEIGHT (METRES)

No of obs 1260  
Mean 1509.06  
Standard dev 11.7483  
Max value 1548.82  
Min value 1494.88

CORRECTED LATITUDE (DEGREES)

No of obs 1260  
Mean 54.0676  
Standard dev 0.211583  
Max value 54.4384  
Min value 53.7524

CORRECTED LONGITUDE (DEGREES)

No of obs 1260  
Mean 1.34733  
Standard dev 0.499512  
Max value 2.36998  
Min value 0.561730

NORTHWARD WIND COMPT (M S-1)

No of obs 1260  
Mean 2.53551  
Standard dev 2.42194  
Max value 6.53325  
Min value -1.40319

EASTWARD WIND COMPT (M S-1)

No of obs 1260  
Mean -1.16143  
Standard dev 1.74480  
Max value 1.85281  
Min value -4.58744

VERTICAL WIND COMPT (M S-1)

No of obs 1260  
Mean -0.108418  
Standard dev 0.321389  
Max value 1.34117  
Min value -0.544594

WIND SPEED (MS-1)

No of obs 1112  
Mean 3.87705  
Standard dev 1.55579  
Max value 6.53811  
Min value 1.10734

WIND DIRECTION (DEG)

Mean 155.389

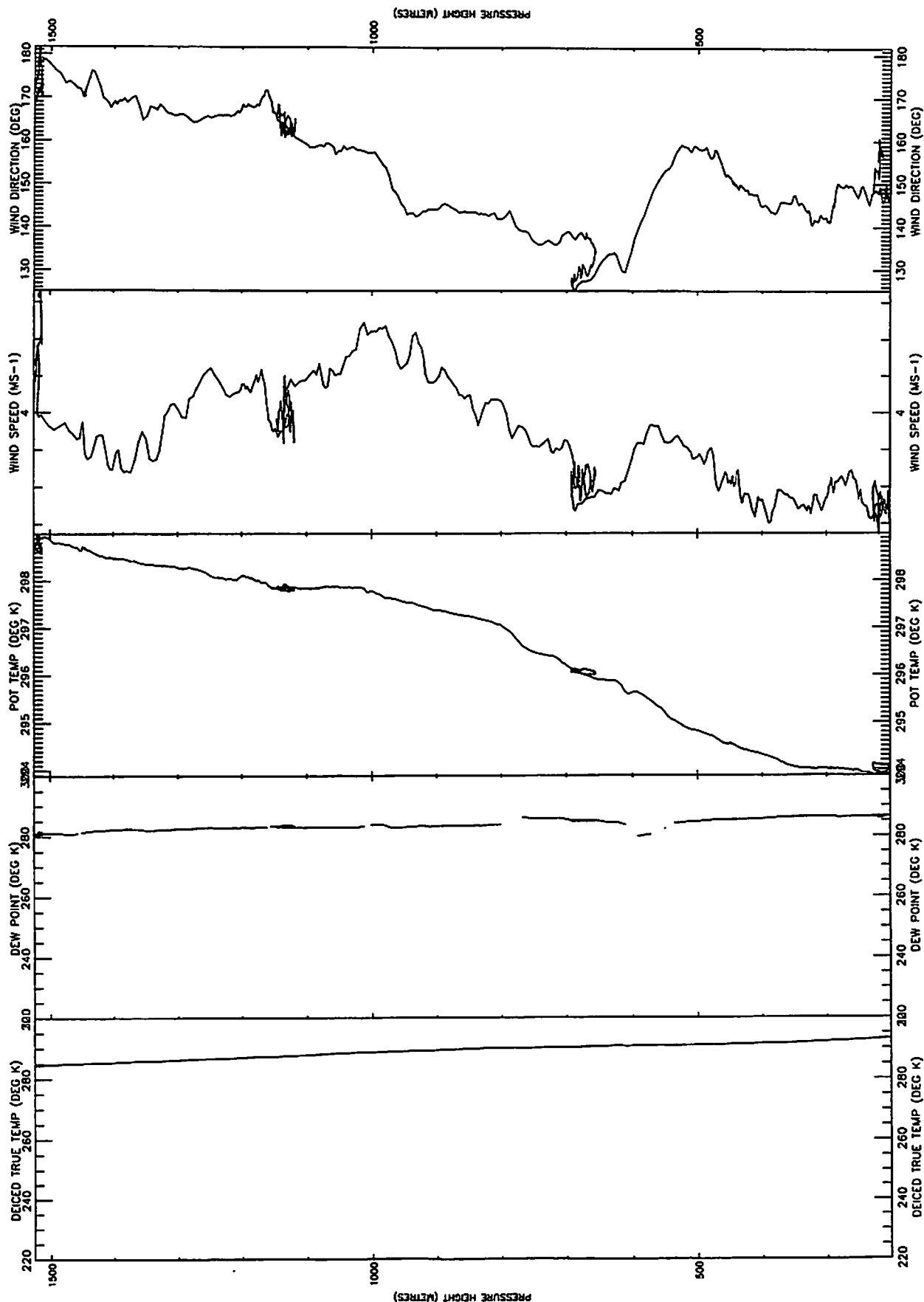
TRUE AIR SPEED (M S-1)

No of obs 1260  
Mean 131.812  
Standard dev 22.7976  
Max value 153.634  
Min value 98.3530

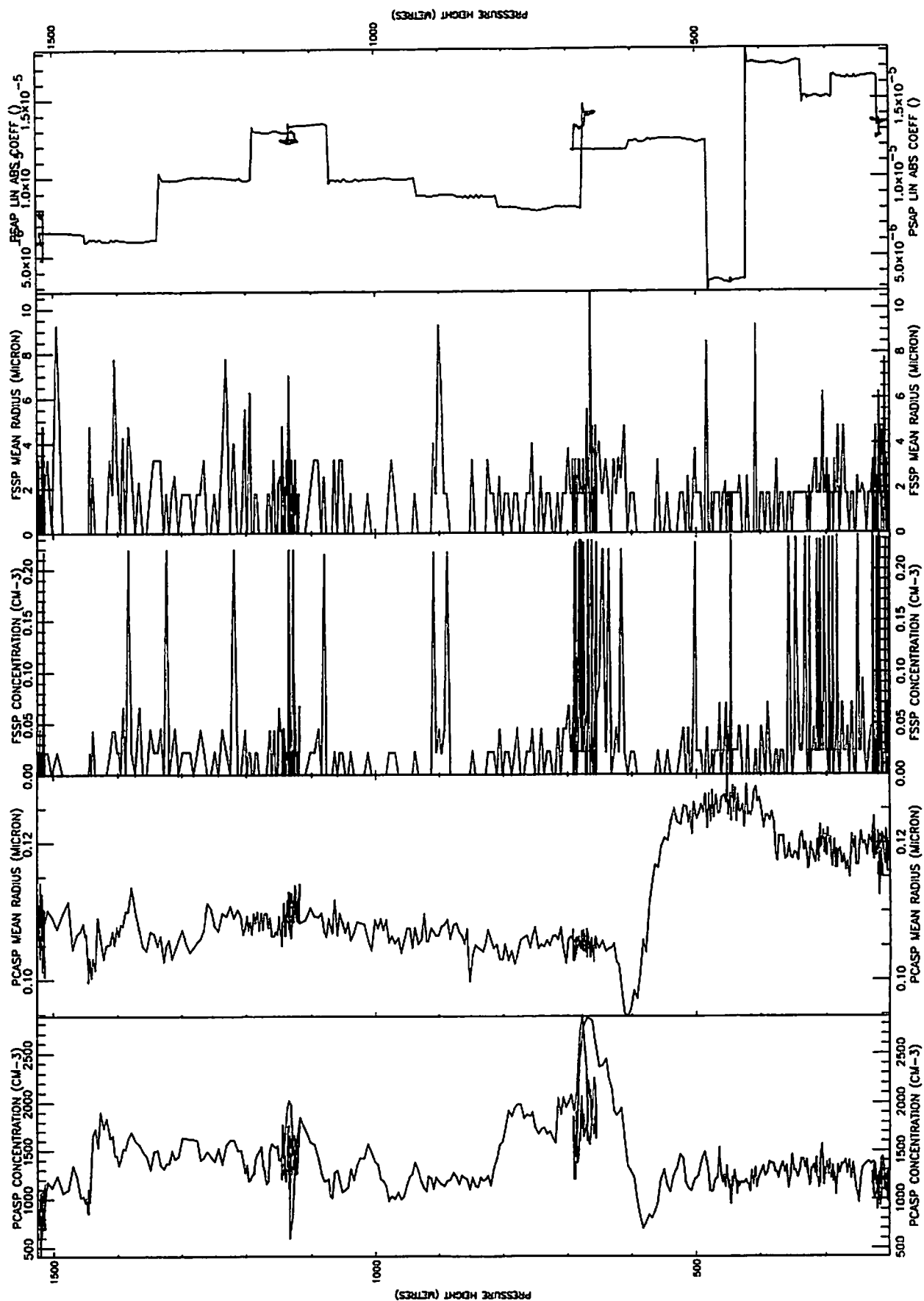
HEADING (DEG)

Mean 308.163

A571 18-AUG-97 P10 5300'-50' From 144135-145307 Plotted 11-Dec-1997 09:57

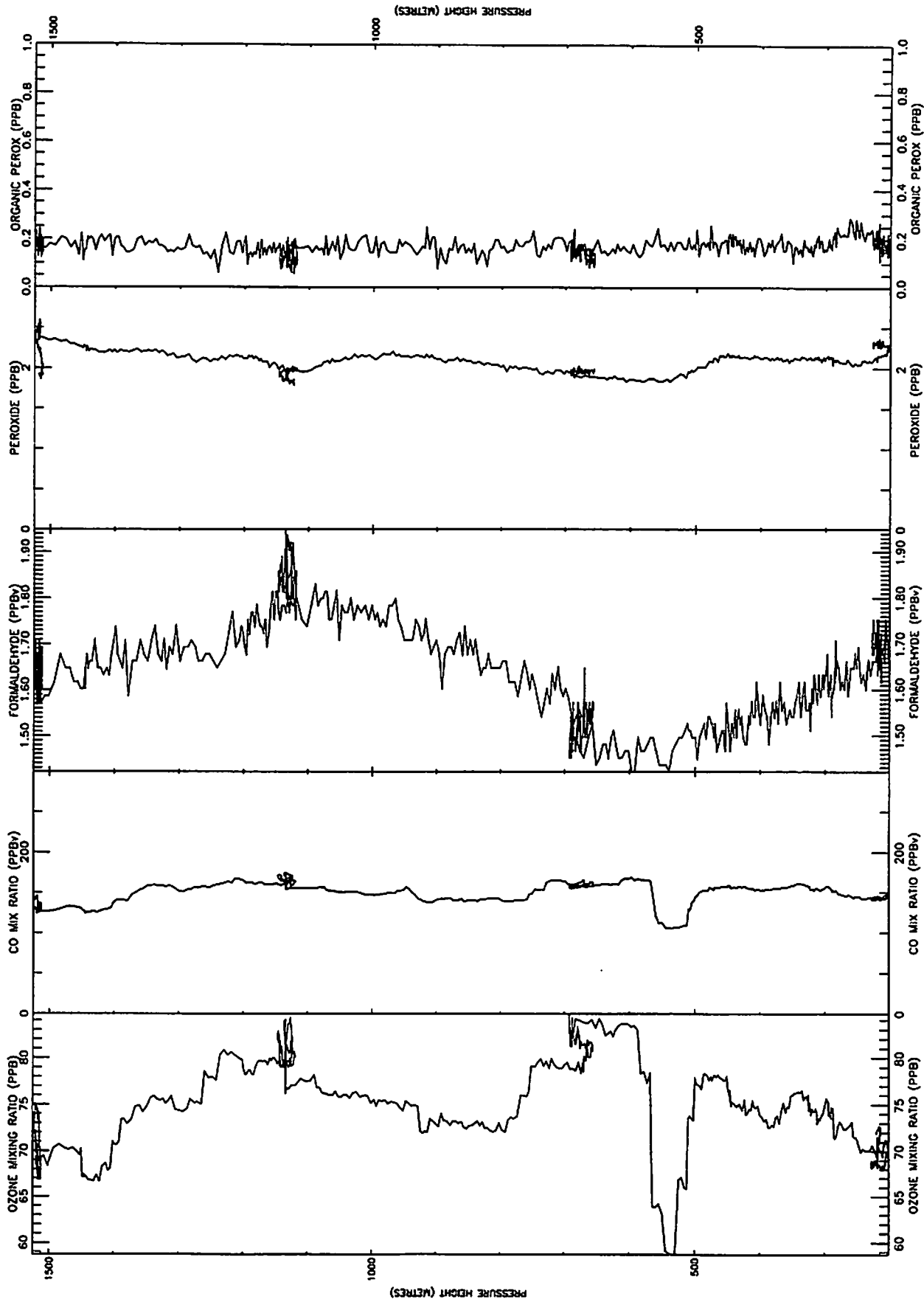


A571 18-AUG-97 P10 5300'-50' From 144135-145307 Plotted 12-Dec-1997 15:03

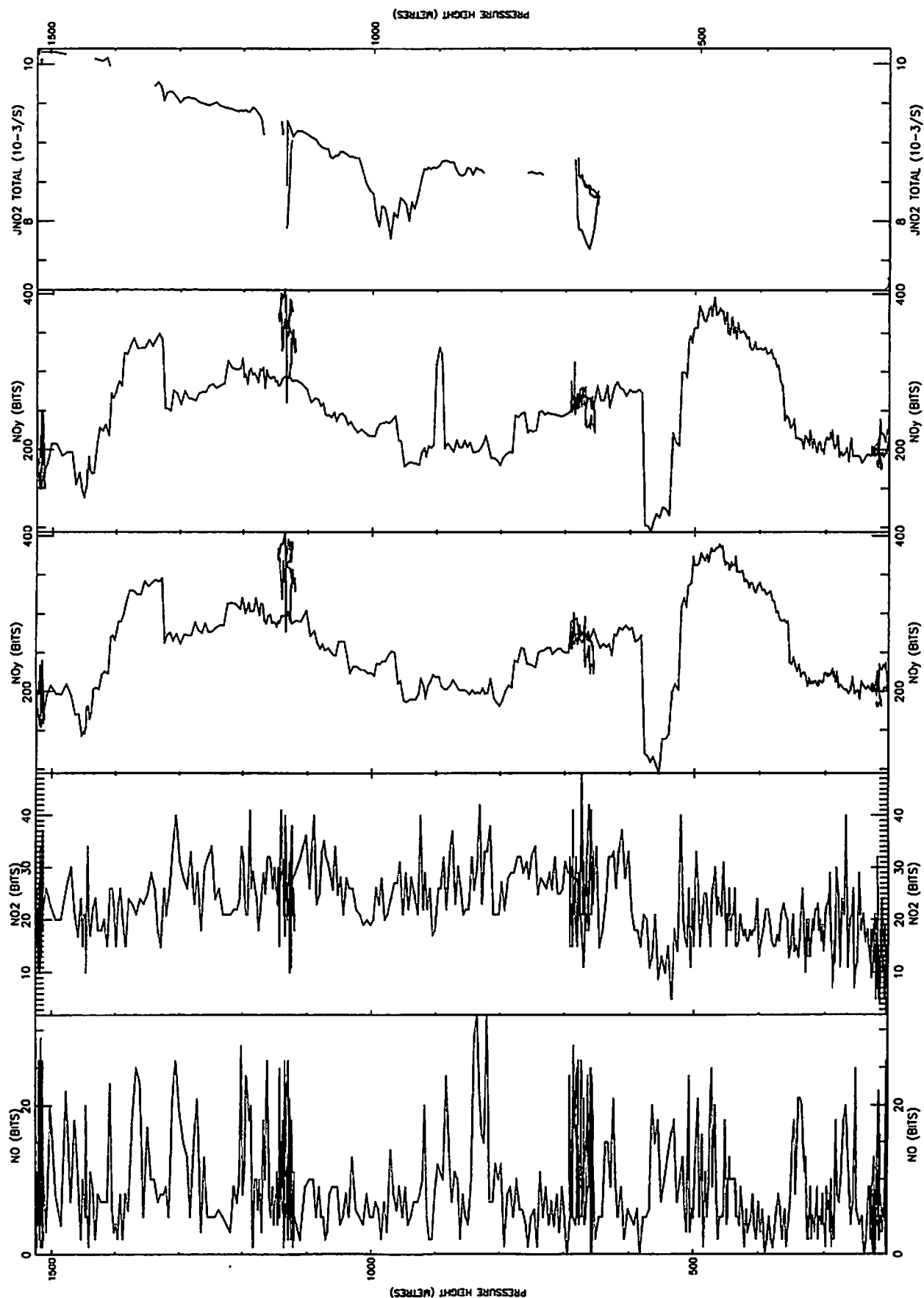




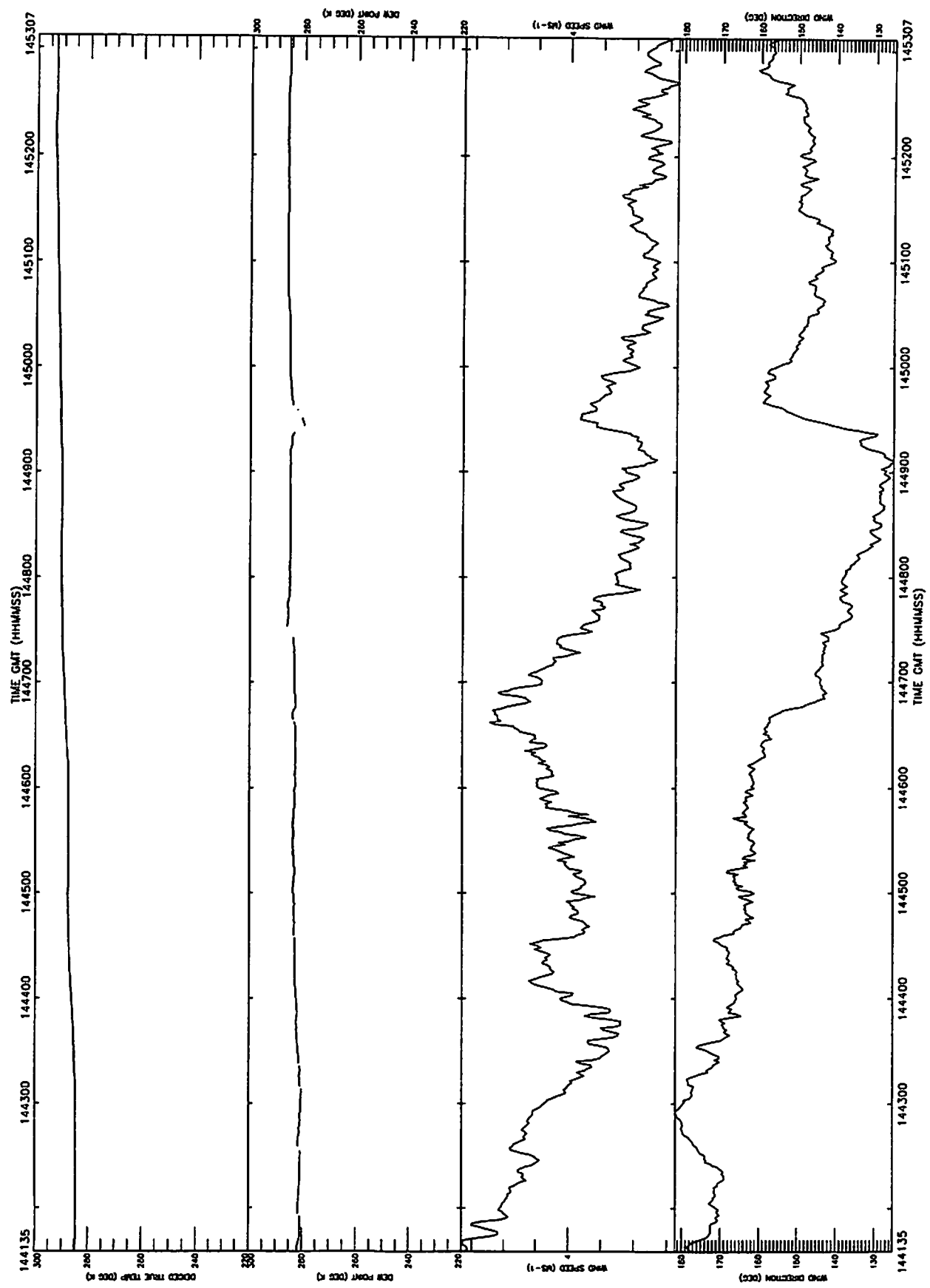
A571 18-AUG-97 P10 5300'-50' From 144135-145307 Plotted 11-Dec-1997 09:57



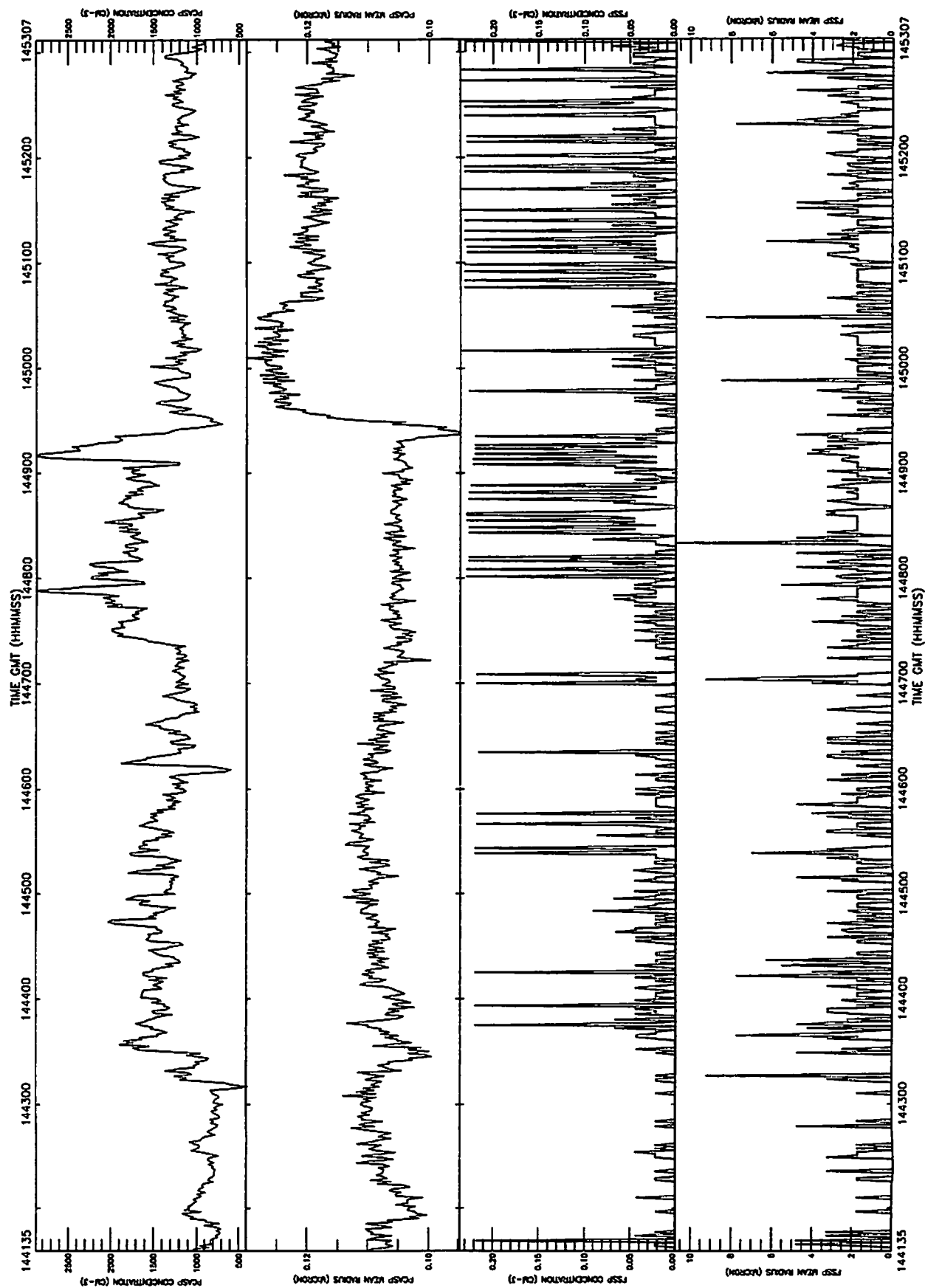
A571 18-AUG-97 P10 5300'-50' From 144135-145307 Plotted 11-Dec-1997 09:57



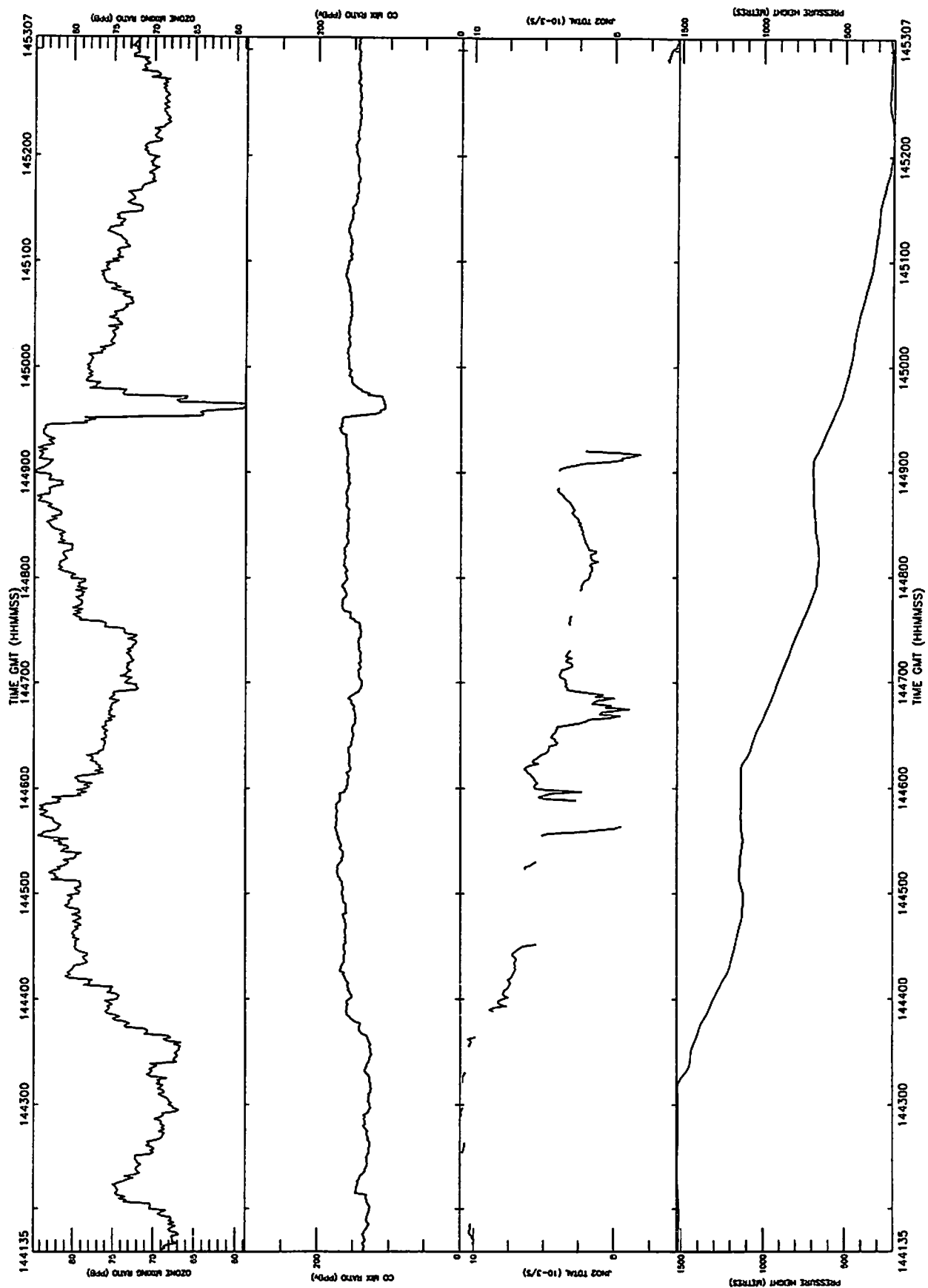
A571 18-AUG-97 P10 5300'-50' From 144135-145307 Plotted 11-Dec-1997 09:57



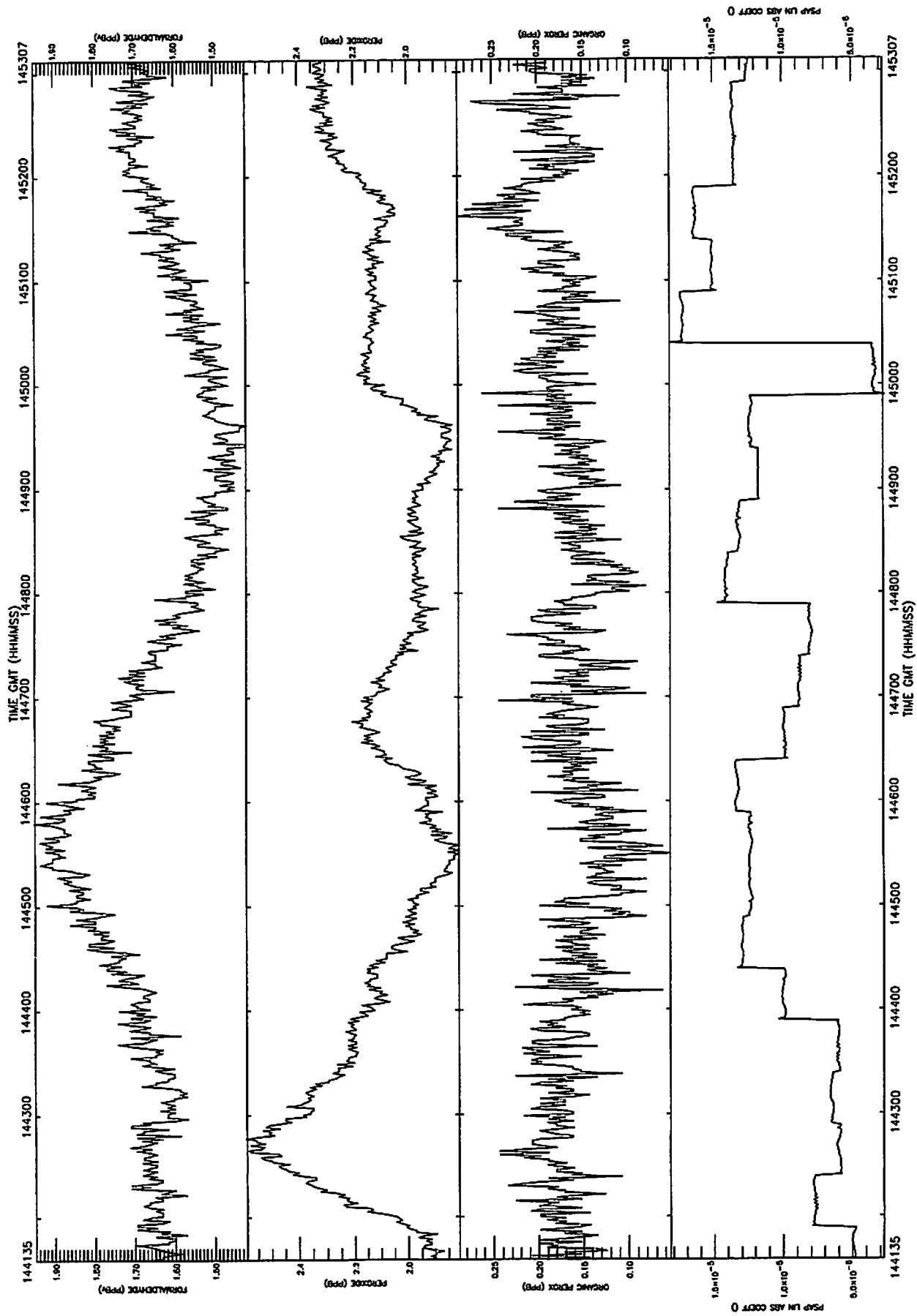
A571 18-AUG-97 P10 5300'-50' From 144135-145307 Plotted 12-Dec-1997 15:03



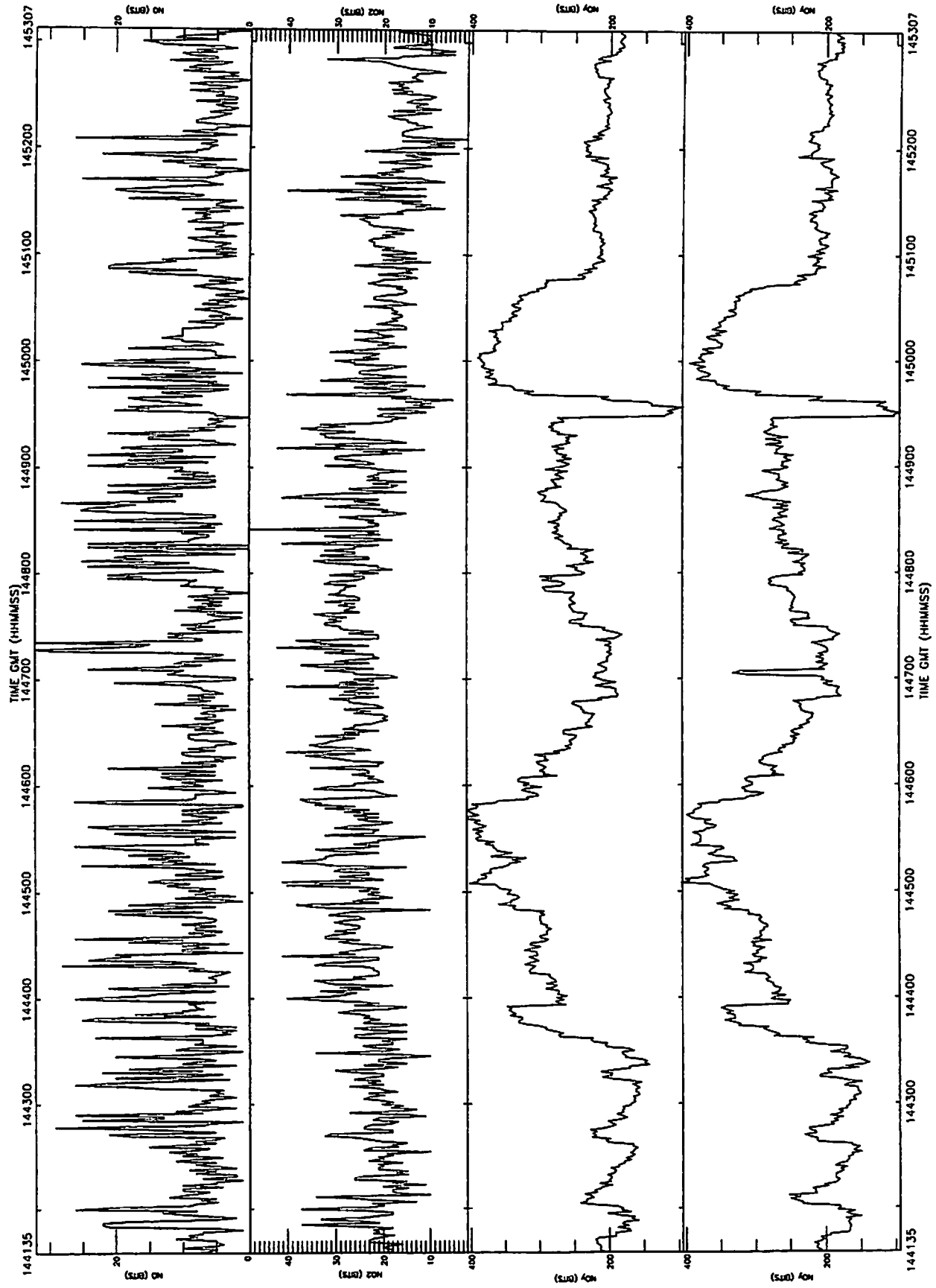
A571 18-AUG-97 P10 5300'-50' From 144135-145307 Plotted 11-Dec-1997 09:57



A571 18-AUG-97 P10 5300'-50' From 144135-145307 Plotted 11-Dec-1997 09:57



A571 18-AUG-97 P10 5300'-50' From 144135-145307 Plotted 11-Dec-1997 09:57



A571 18-AUG-97 P10 5300'-50' From 144135-145307 Plotted 12-Dec-1997 15:03

STATIC PRESSURE (MB)

No of obs 693  
Mean 915.508  
Standard dev 49.6679  
Max value 989.174  
Min value 842.902

DEICED TRUE TEMP (DEG K)

No of obs 693  
Mean 289.061  
Standard dev 2.76999  
Max value 293.128  
Min value 284.460

DEW POINT (DEG K)

No of obs 693  
Mean 283.873  
Standard dev 1.84784  
Max value 286.419  
Min value 279.842

OZONE MIXING RATIO (PPB)

No of obs 693  
Mean 75.1514  
Standard dev 5.12337  
Max value 84.7107  
Min value 58.7489

PCASP CONCENTRATION (CM-3)

No of obs 693  
Mean 1325.88  
Standard dev 362.631  
Max value 2875.16  
Min value 412.648

FSSP CONCENTRATION (CM-3)

No of obs 693  
Mean 3.330284e-02  
Standard dev 5.901698e-02  
Max value 0.235629  
Min value 0.000000

PRESSURE HEIGHT (METRES)

No of obs 693  
Mean 857.233  
Standard dev 449.460  
Max value 1525.62  
Min value 202.365

CORRECTED LATITUDE (DEGREES)

No of obs 693  
Mean 54.5704  
Standard dev 7.171755e-02  
Max value 54.6889  
Min value 54.4384

CORRECTED LONGITUDE (DEGREES)

No of obs 693  
Mean 1.91006  
Standard dev 0.281131  
Max value 2.39071  
Min value 1.42086

NORTHWARD WIND COMPT (M S-1)

No of obs 693  
Mean 3.26909  
Standard dev 0.983069  
Max value 5.64710  
Min value 1.55567

EASTWARD WIND COMPT (M S-1)

No of obs 693  
Mean -1.41858  
Standard dev 0.701856  
Max value 0.132721  
Min value -3.10457

VERTICAL WIND COMPT (M S-1)

No of obs 693  
Mean 0.615584  
Standard dev 0.302371  
Max value 1.27274  
Min value -1.439667e-02

WIND SPEED (MS-1)

No of obs 693  
Mean 3.68047  
Standard dev 0.781852  
Max value 5.65920  
Min value 2.36771

WIND DIRECTION (DEG)

Mean 156.542

TRUE AIR SPEED (M S-1)

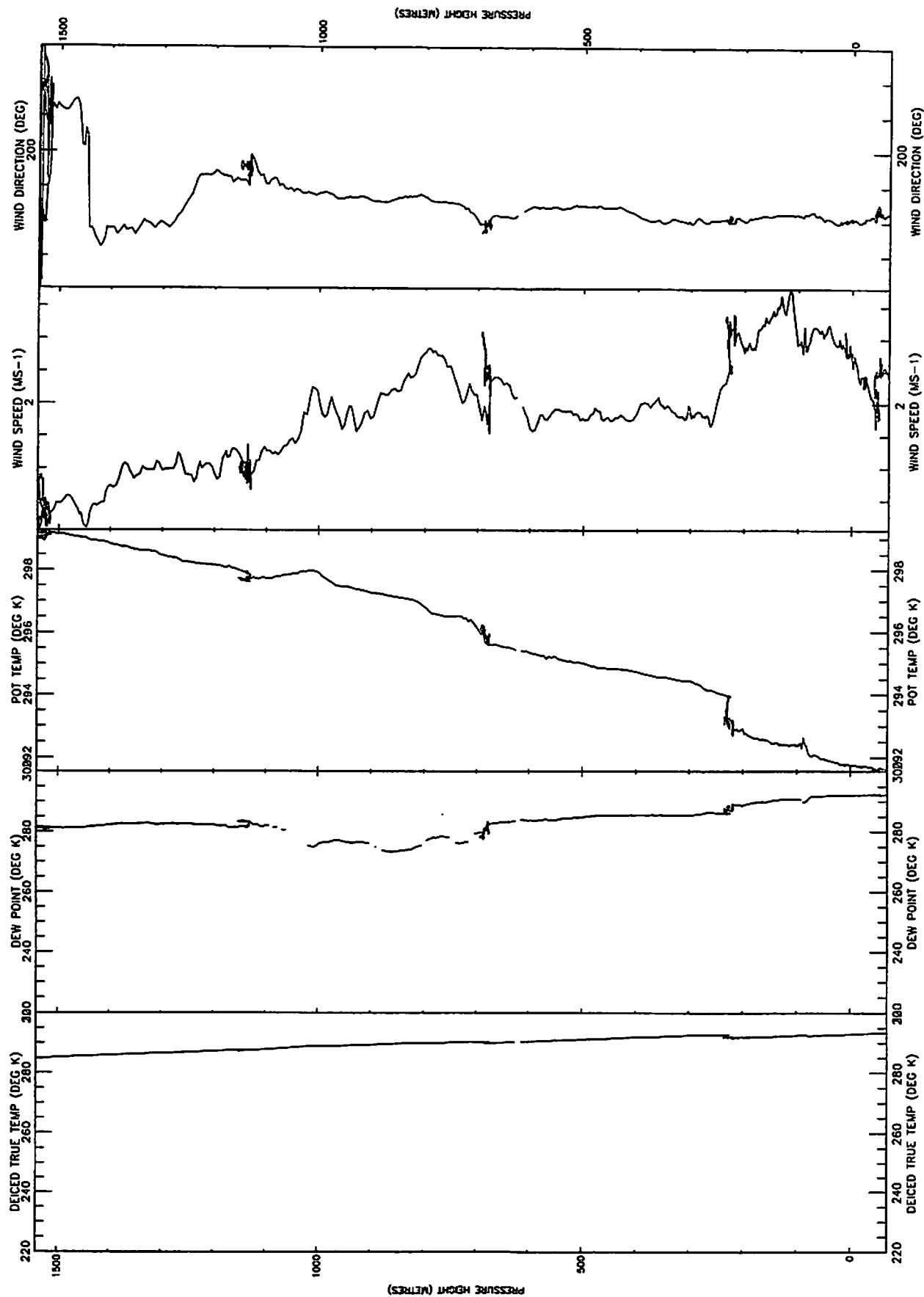
No of obs 693  
Mean 99.0673  
Standard dev 2.76107  
Max value 104.590  
Min value 93.2097

HEADING (DEG)

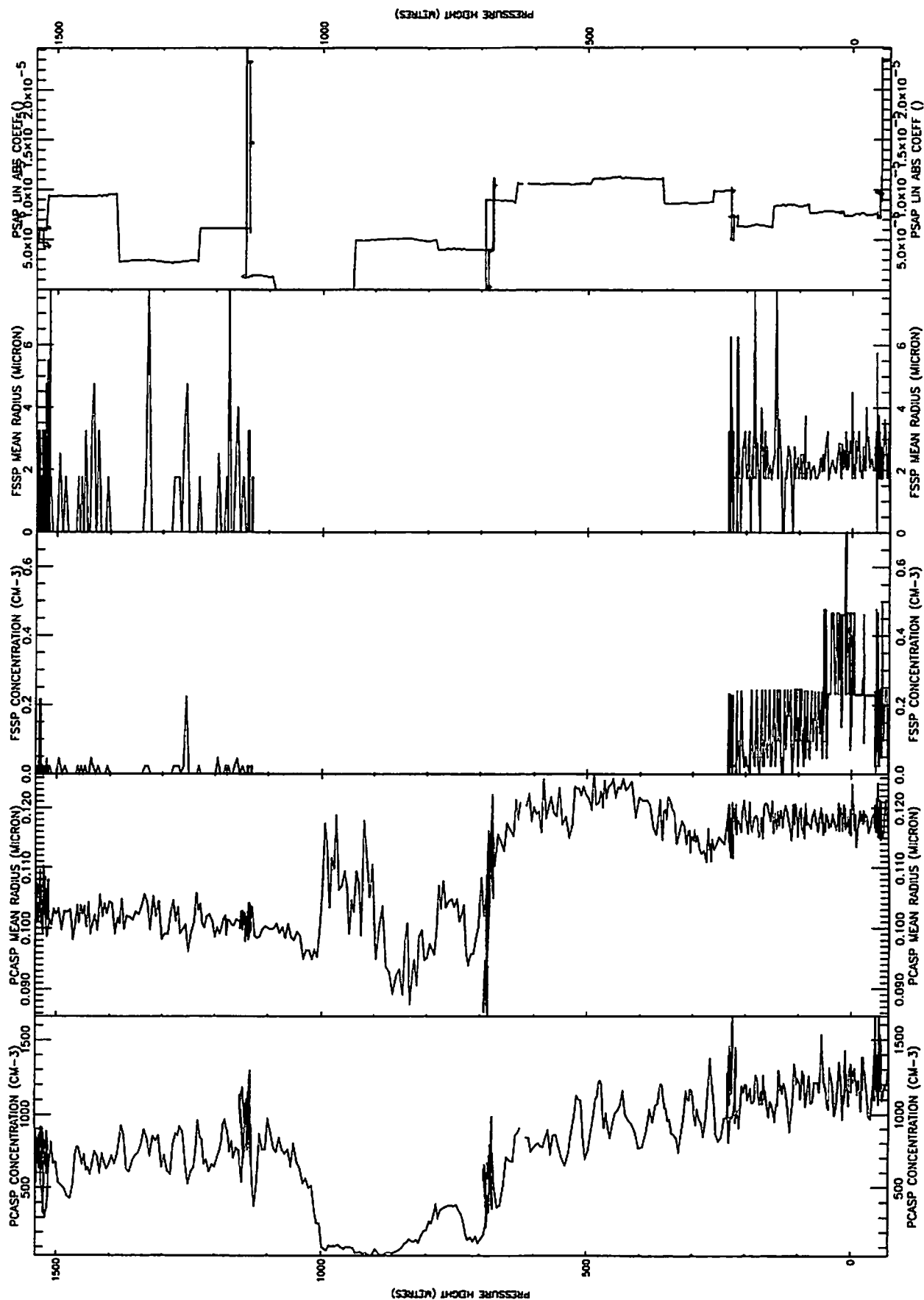
Mean 66.0418



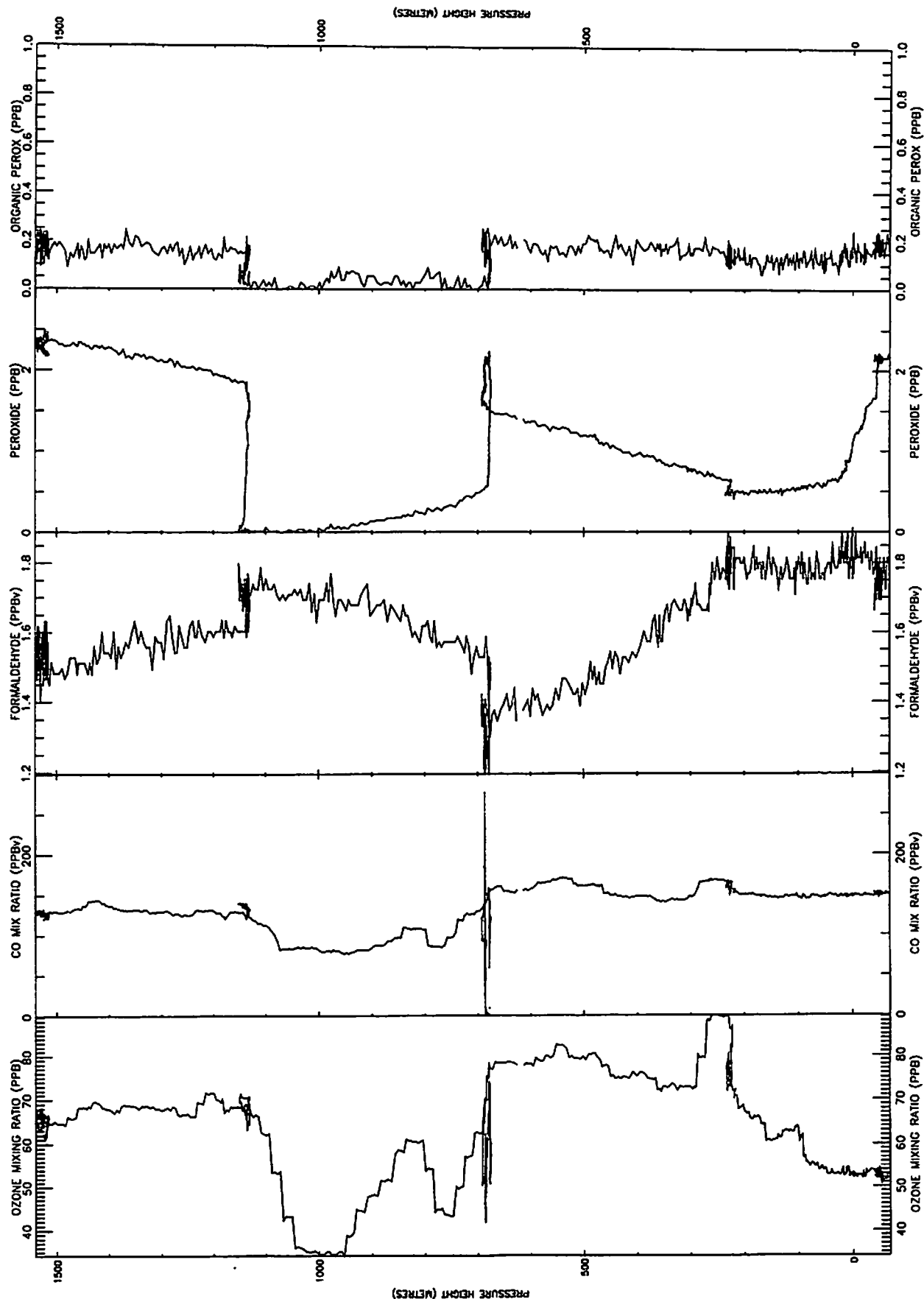
A571 18-AUG-97 P11 50'-5300' From 145513-151222 Plotted 11-Dec-1997 09:59



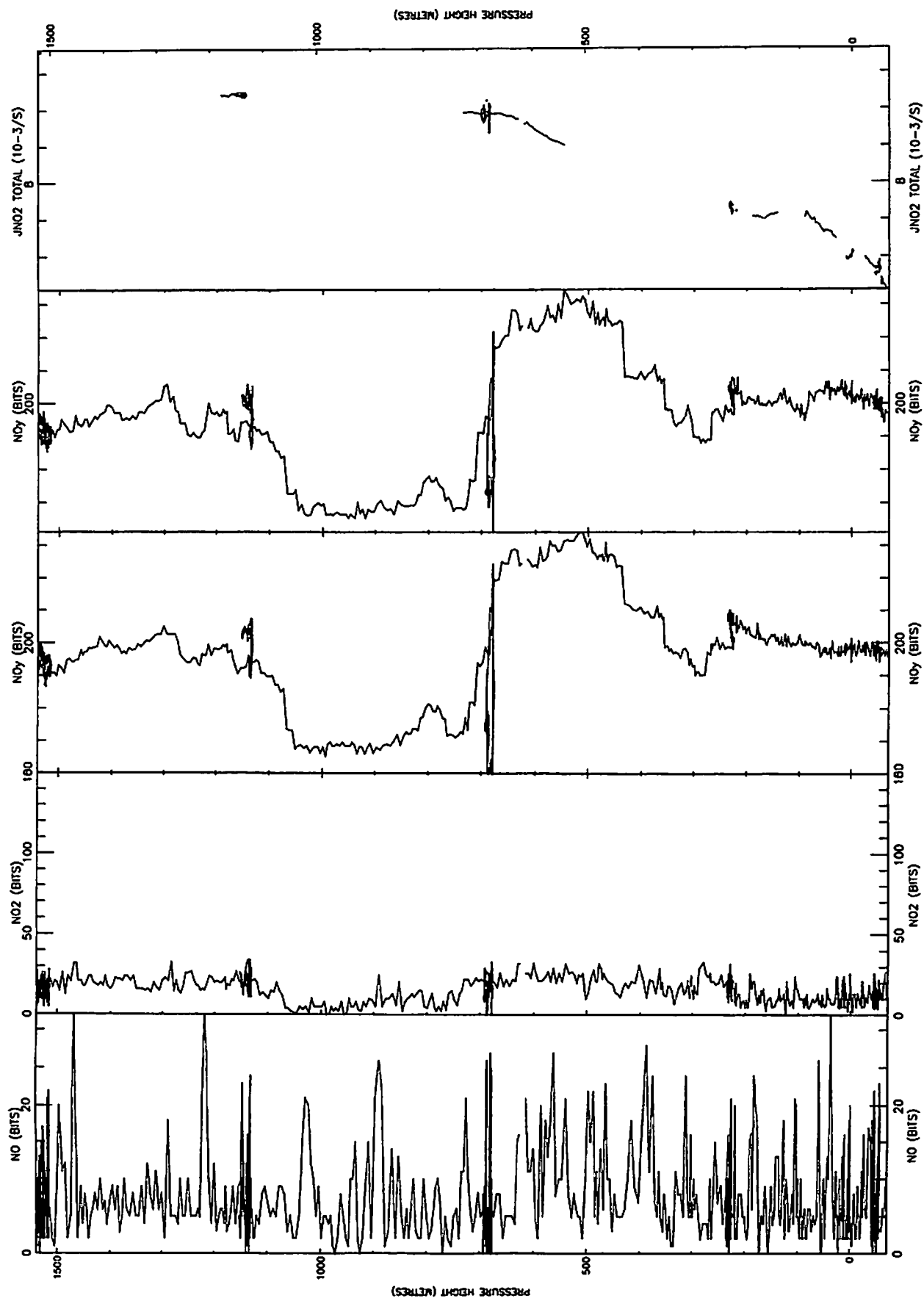
A571 18-AUG-97 P11 50'-5300' From 145513-151222 Plotted 12-Dec-1997 15:06



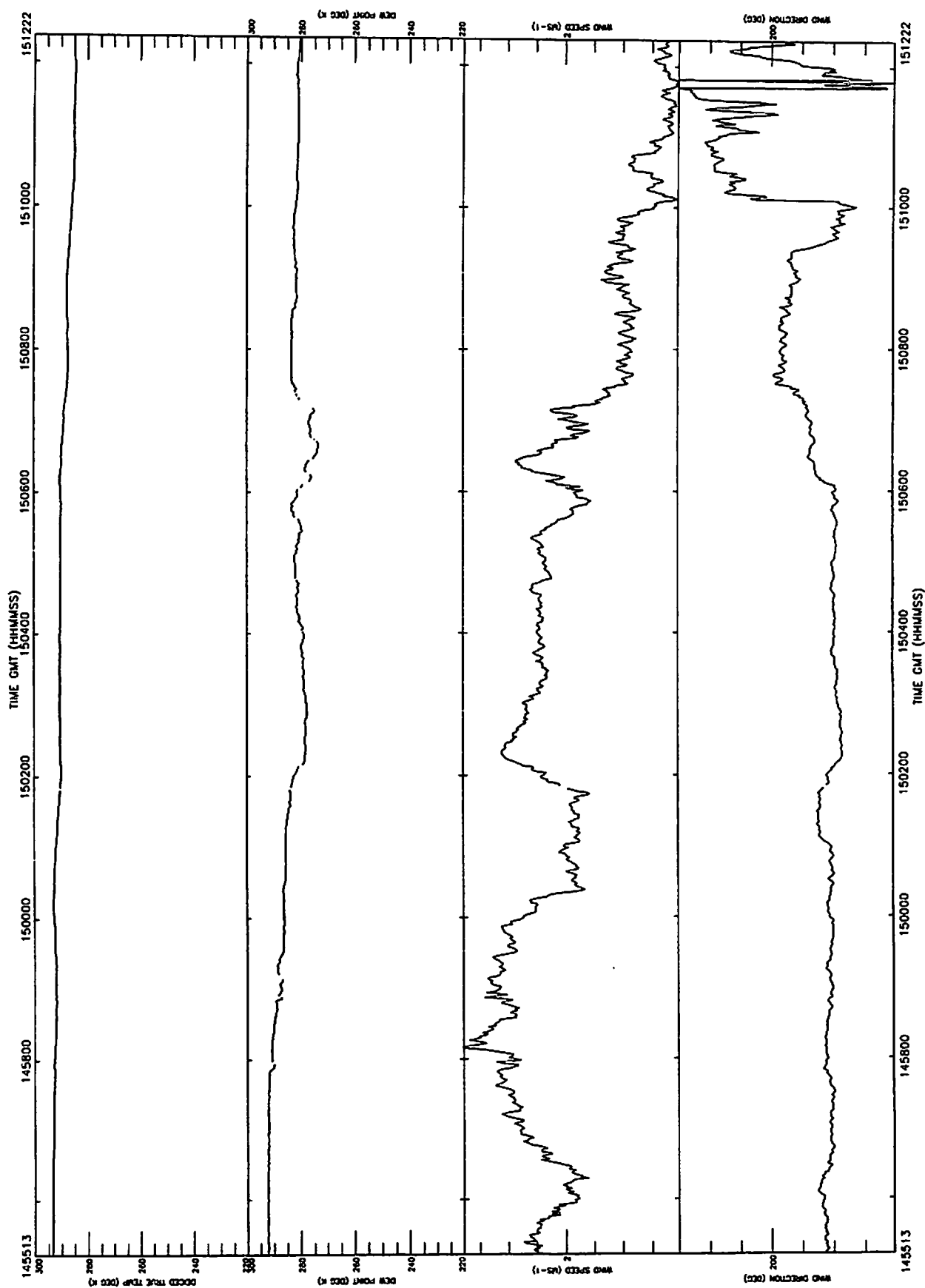
A571 18-AUG-97 P11 50'-5300' From 145513-151222 Plotted 11-Dec-1997 09:59



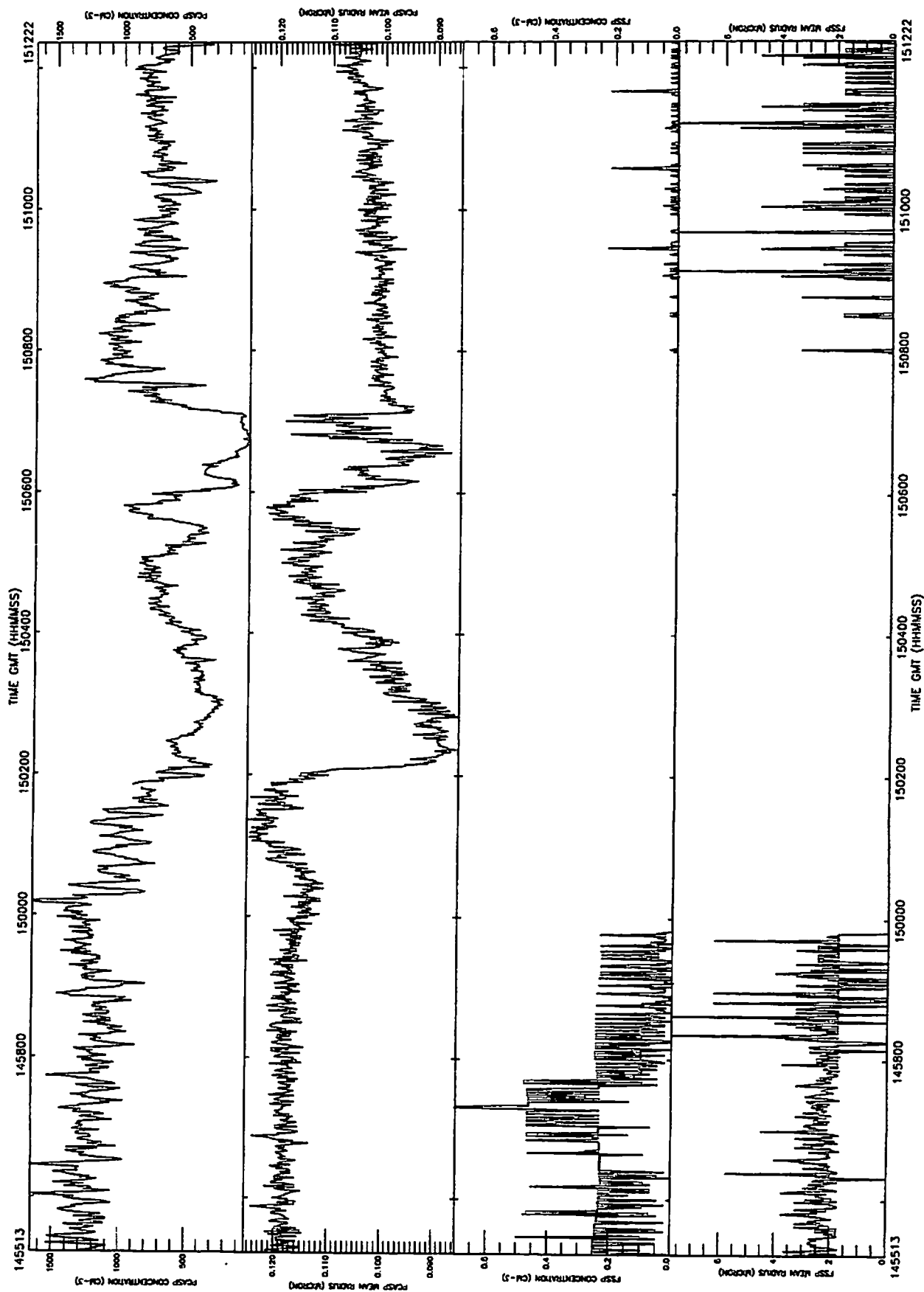
A571 18-AUG-97 P11 50'-5300' From 145513-151222 Plotted 11-Dec-1997 15:19



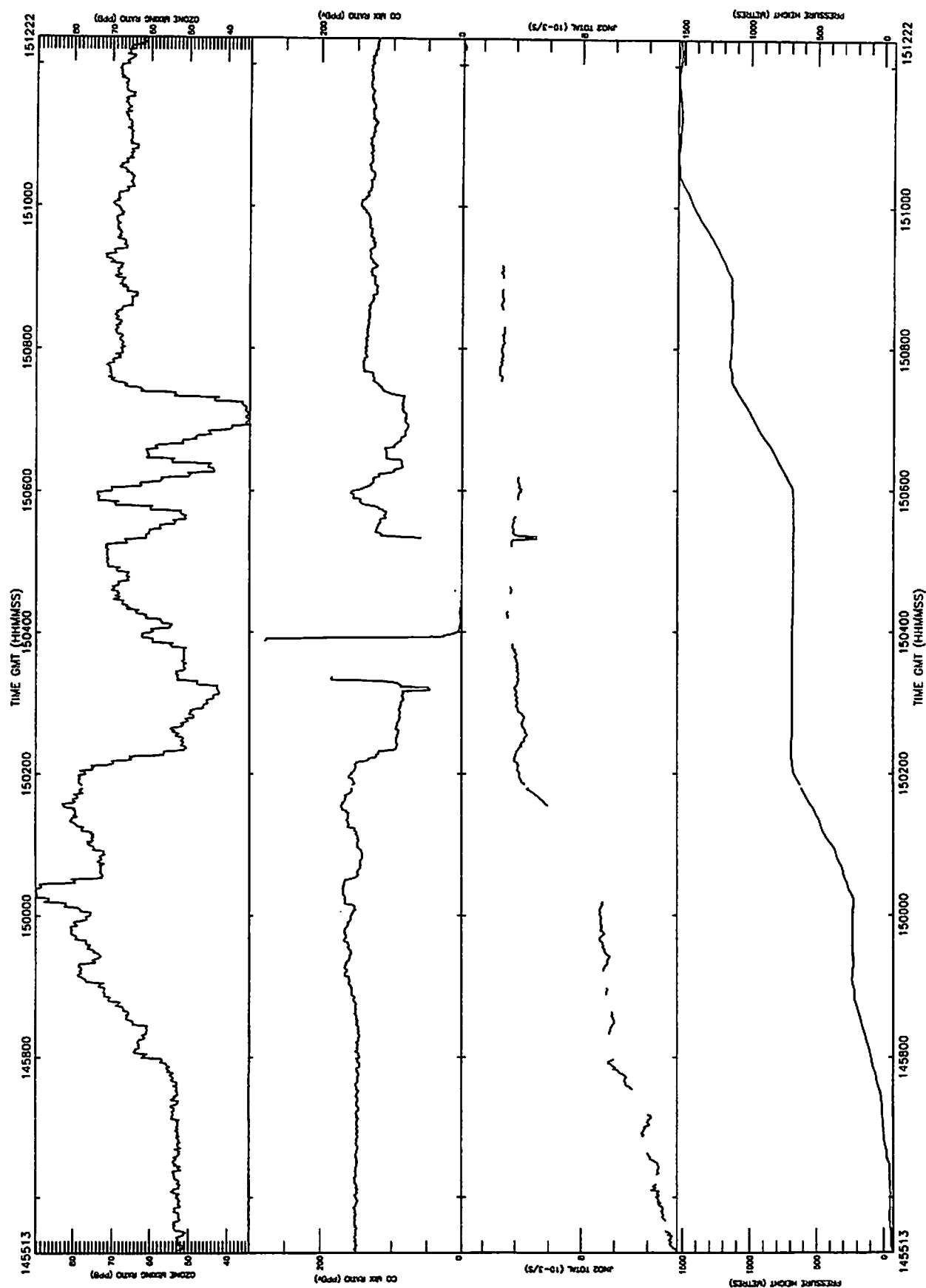
A571 18-AUG-97 P11 50'-5300' From 145513-151222 Plotted 11-Dec-1997 09:59



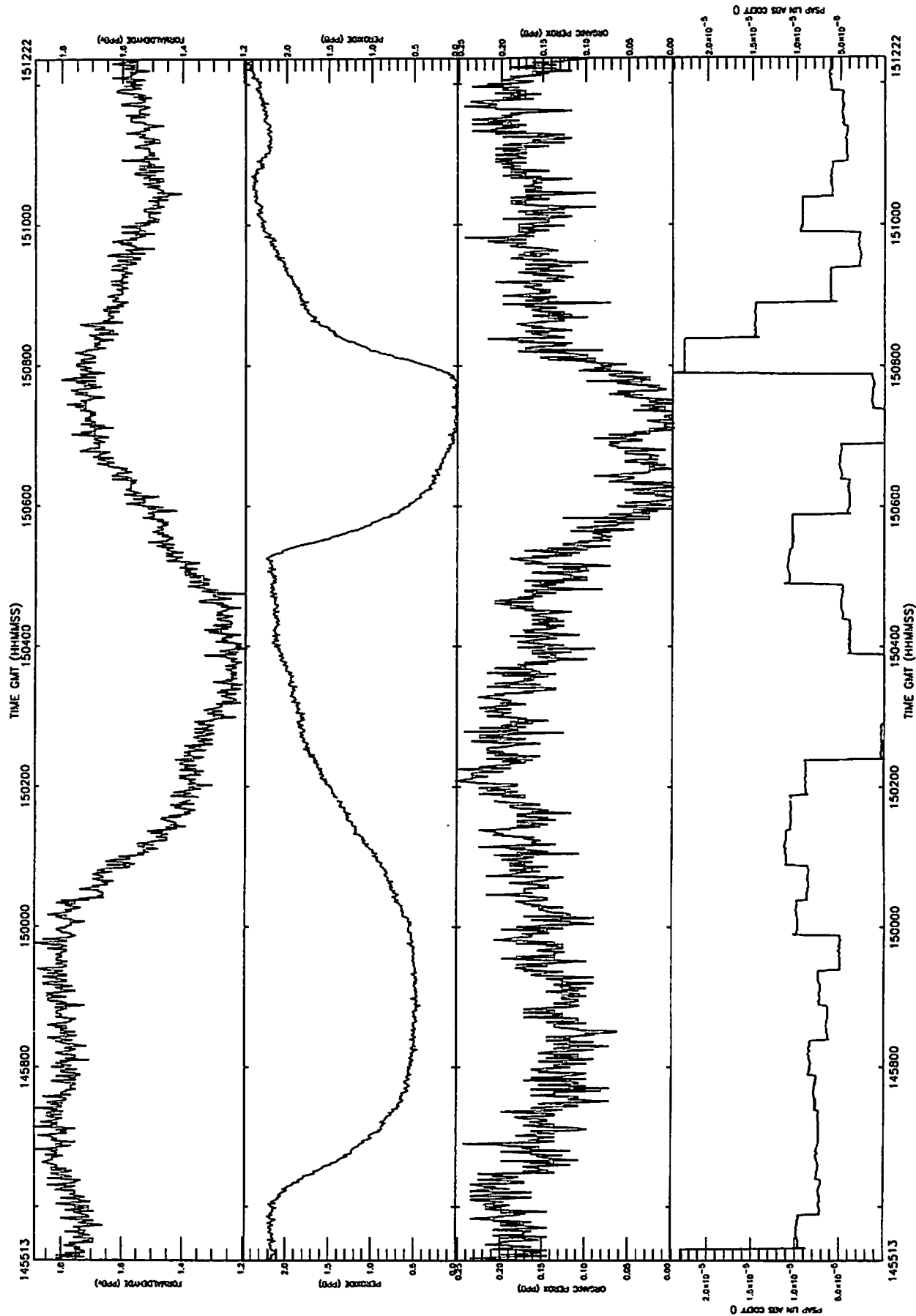
A571 18-AUG-97 P11 50'-5300' From 145513-151222 Plotted 12-Dec-1997 15:06



A571 18-AUG-97 P11 50'-5300' From 145513-151222 Plotted 11-Dec-1997 09:59

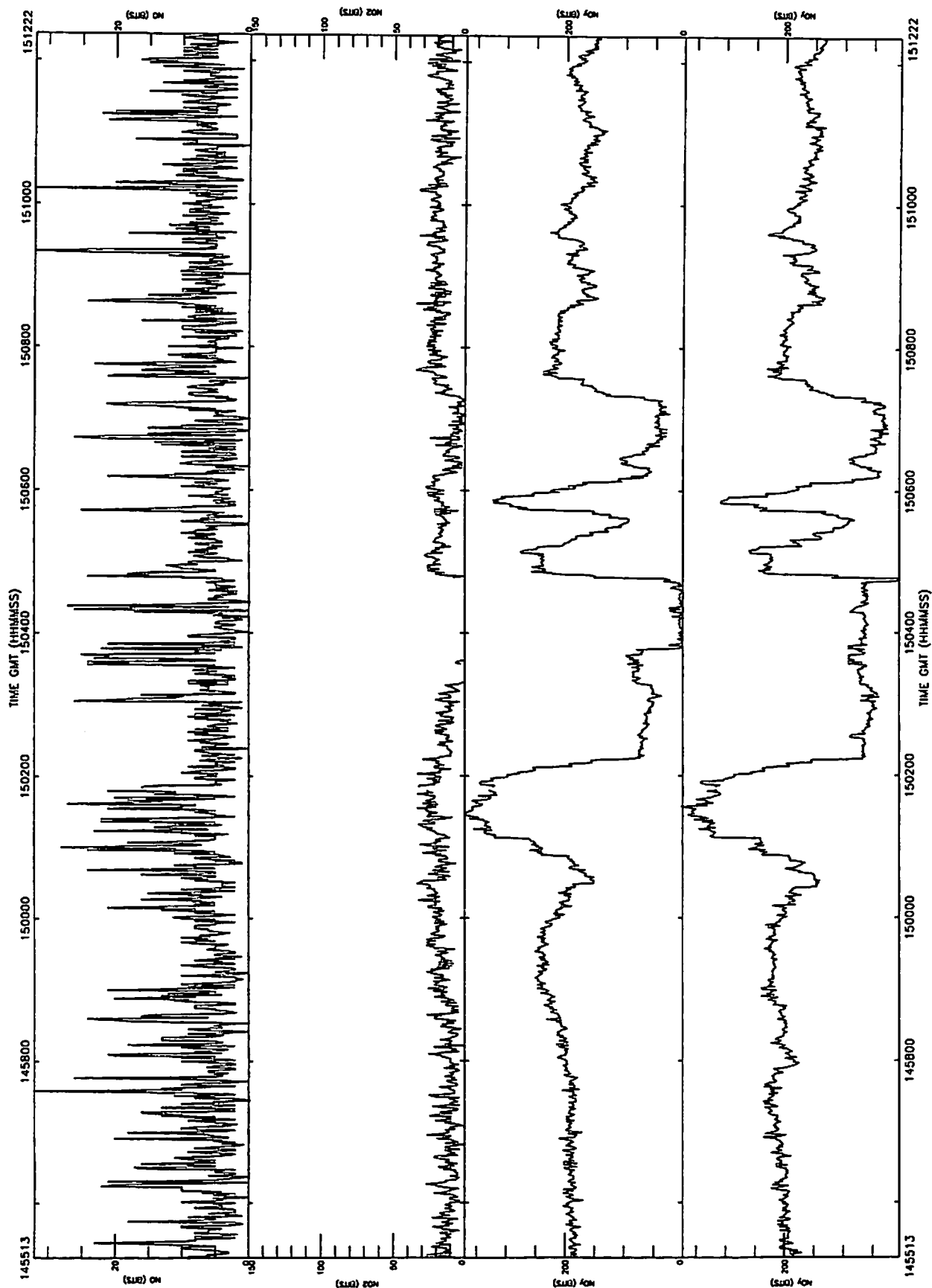


A571 18-AUG-97 P11 50'-5300' From 145513-151222 Plotted 11-Dec-1997 09:59





A571 18-AUG-97 P11 50'-5300' From 145513-151222 Plotted 11-Dec-1997 15:19



A571 18-AUG-97 P11 50'-5300' From 145513-151222 Plotted 12-Dec-1997 15:06

STATIC PRESSURE (MB)

No of obs 1028  
Mean 934.557  
Standard dev 56.9489  
Max value 1021.69  
Min value 841.350

DEICED TRUE TEMP (DEG K)

No of obs 1028  
Mean 289.807  
Standard dev 2.69454  
Max value 293.409  
Min value 284.632

DEW POINT (DEG K)

No of obs 1028  
Mean 283.811  
Standard dev 4.87438  
Max value 292.318  
Min value 273.239

OZONE MIXING RATIO (PPB)

No of obs 1028  
Mean 63.1445  
Standard dev 10.6978  
Max value 89.2632  
Min value 34.1863

PCASP CONCENTRATION (CM-3)

No of obs 1028  
Mean 845.787  
Standard dev 347.406  
Max value 1657.56  
Min value 41.8583

FSSP CONCENTRATION (CM-3)

No of obs 1028  
Mean 5.086089e-02  
Standard dev 0.109205  
Max value 0.699605  
Min value 0.000000

PRESSURE HEIGHT (METRES)

No of obs 1028  
Mean 689.232  
Standard dev 508.712  
Max value 1540.63  
Min value -70.0172

CORRECTED LATITUDE (DEGREES)

No of obs 1028  
Mean 54.9796  
Standard dev 0.143339  
Max value 55.2052  
Min value 54.7356

CORRECTED LONGITUDE (DEGREES)

No of obs 1028  
Mean 3.17990  
Standard dev 0.372036  
Max value 3.86500  
Min value 2.55068

NORTHWARD WIND COMPT (M S-1)

No of obs 1028  
Mean 0.580737  
Standard dev 0.474172  
Max value 2.04143  
Min value -0.349823

EASTWARD WIND COMPT (M S-1)

No of obs 1028  
Mean -1.65483  
Standard dev 1.15122  
Max value 0.823250  
Min value -3.47692

VERTICAL WIND COMPT (M S-1)

No of obs 1028  
Mean -0.189541  
Standard dev 0.305502  
Max value 0.554306  
Min value -0.748734

WIND SPEED (MS-1)

No of obs 1028  
Mean 1.93805  
Standard dev 0.932296  
Max value 3.77781  
Min value 3.978547e-02

WIND DIRECTION (DEG)

Mean 109.338

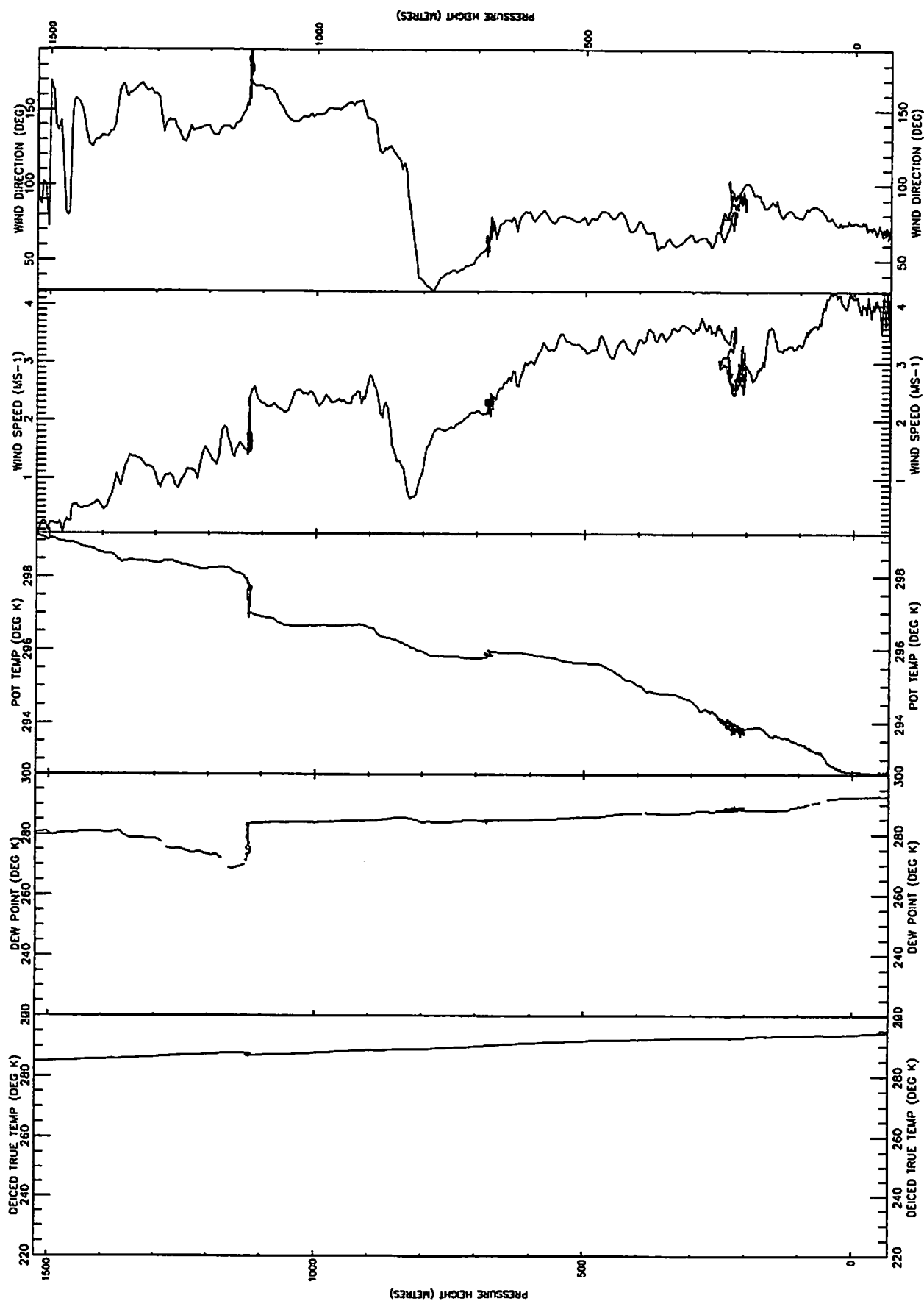
TRUE AIR SPEED (M S-1)

No of obs 1028  
Mean 97.7552  
Standard dev 3.81927  
Max value 105.633  
Min value 89.0942

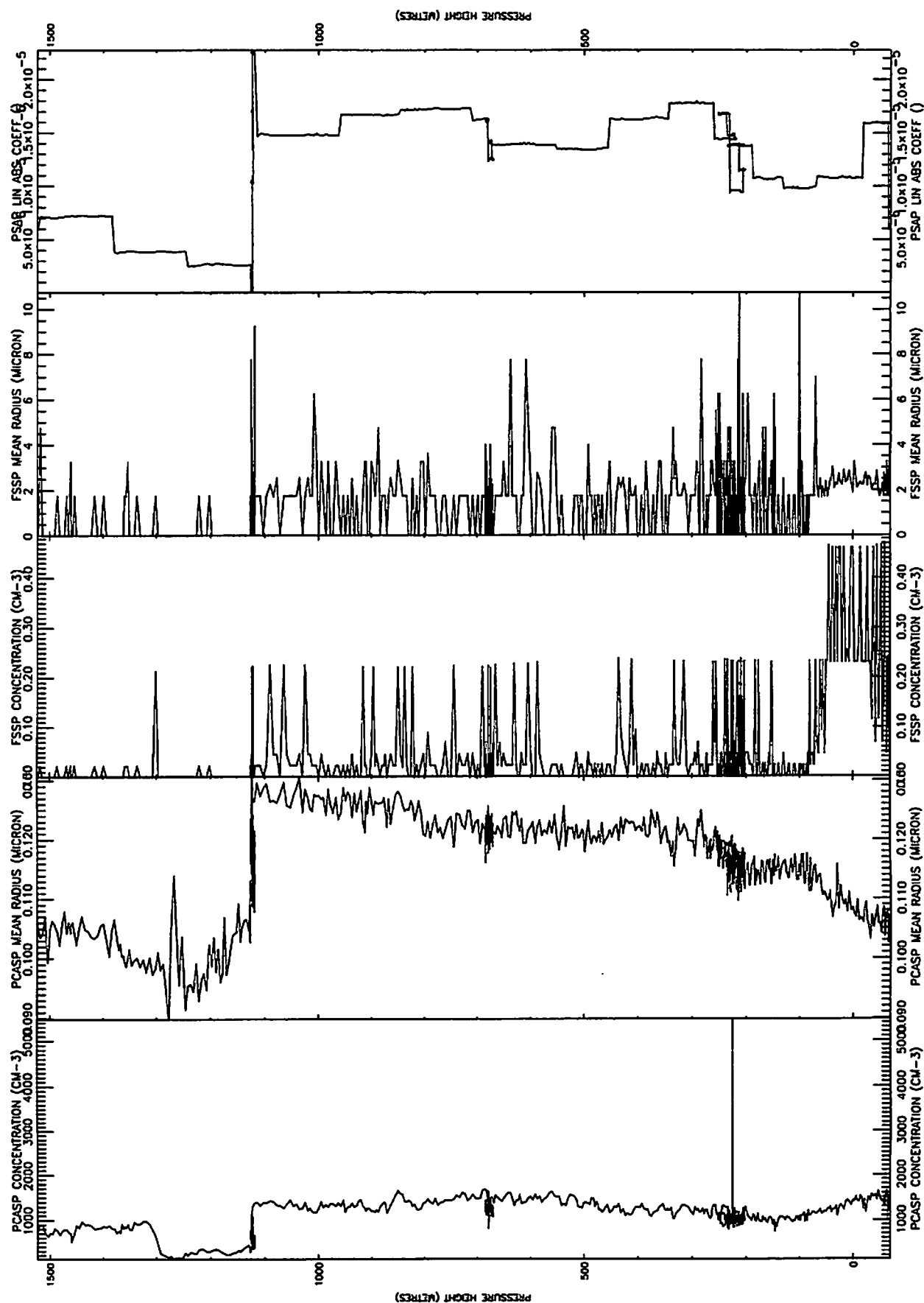
HEADING (DEG)

Mean 58.1646

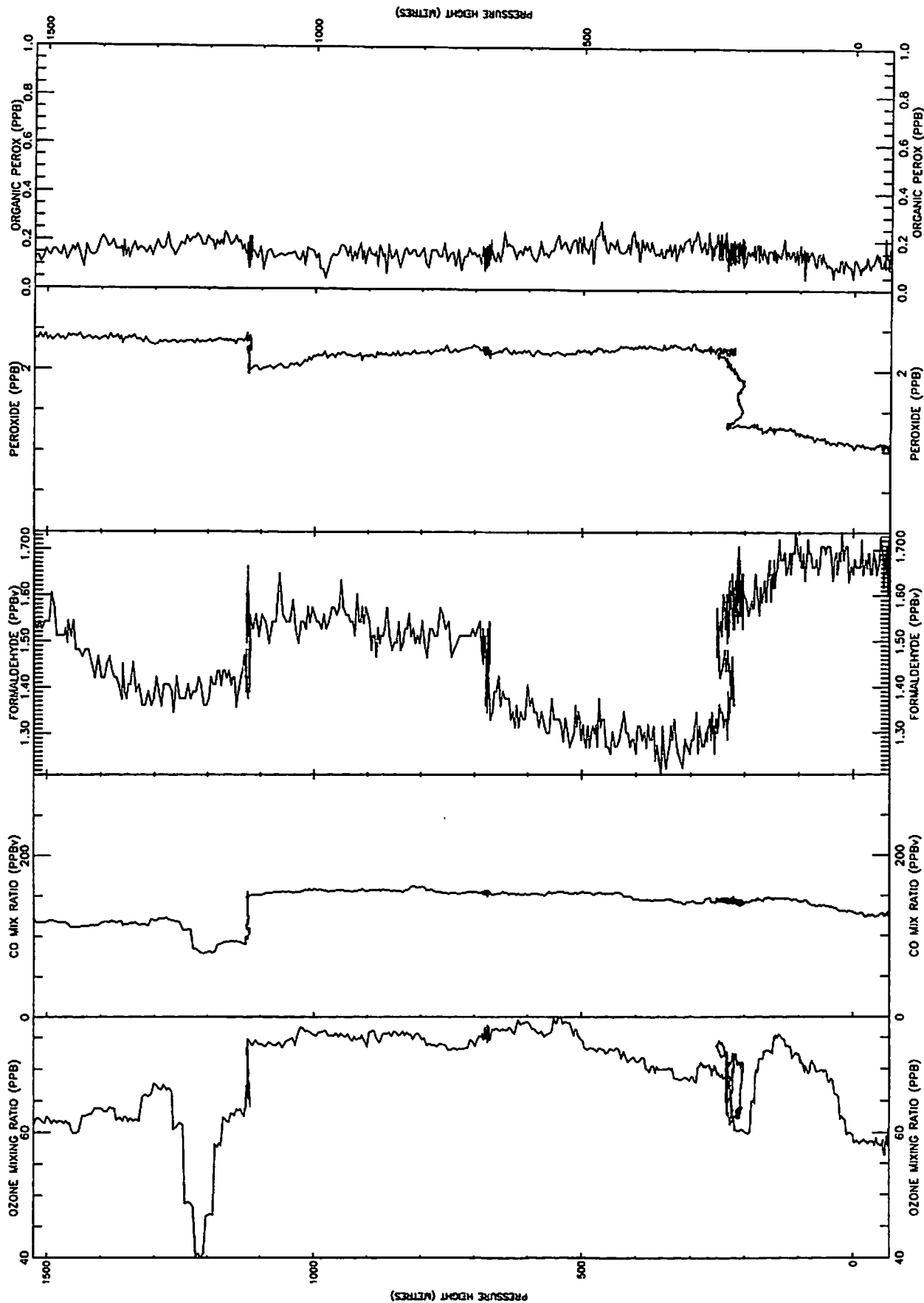
A571 18-AUG-97 P12 5300'-50' From 151222-152737 Plotted 11-Dec-1997 10:05



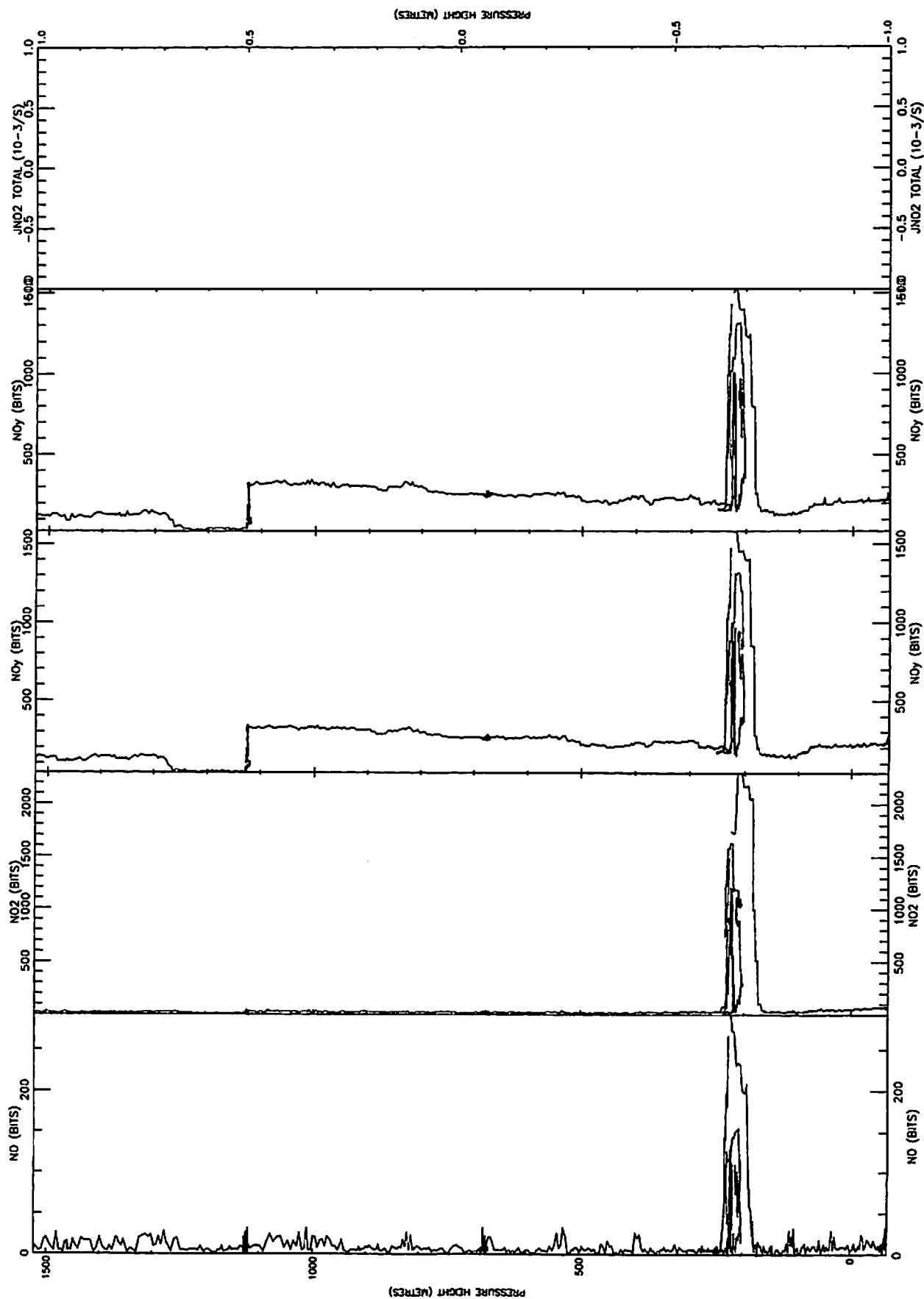
A571 18-AUG-97 P12 5300'-50' From 151222-152737 Plotted 12-Dec-1997 15:09



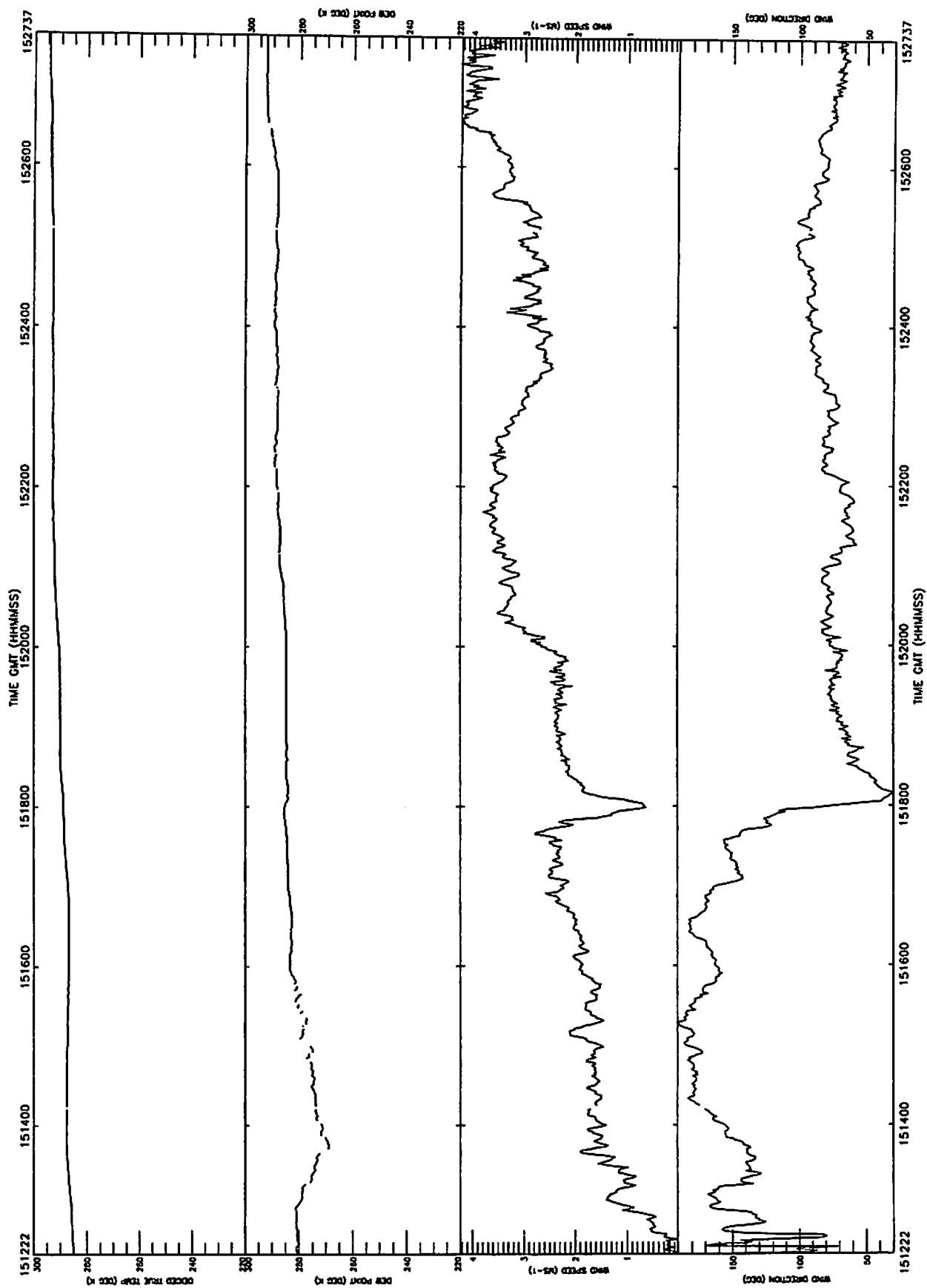
A571 18-AUG-97 P12 5300'-50' From 151222-152737 Plotted 11-Dec-1997 10:05



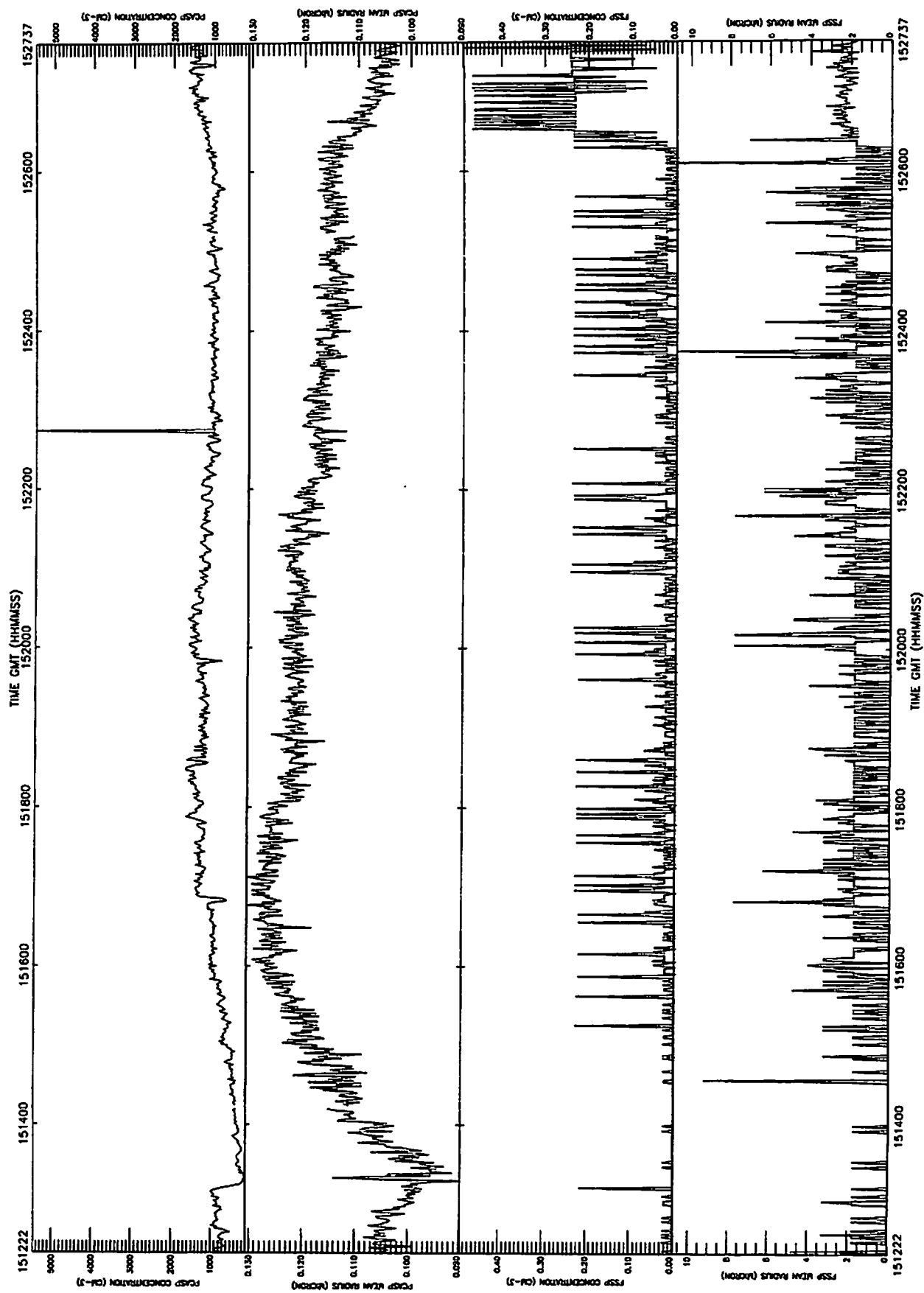
A571 18-AUG-97 P12 5300'-50' From 151222-152737 Plotted 11-Dec-1997 10:05



A571 18-AUG-97 P12 5300'-50' From 151222-152737 Plotted 11-Dec-1997 10:05

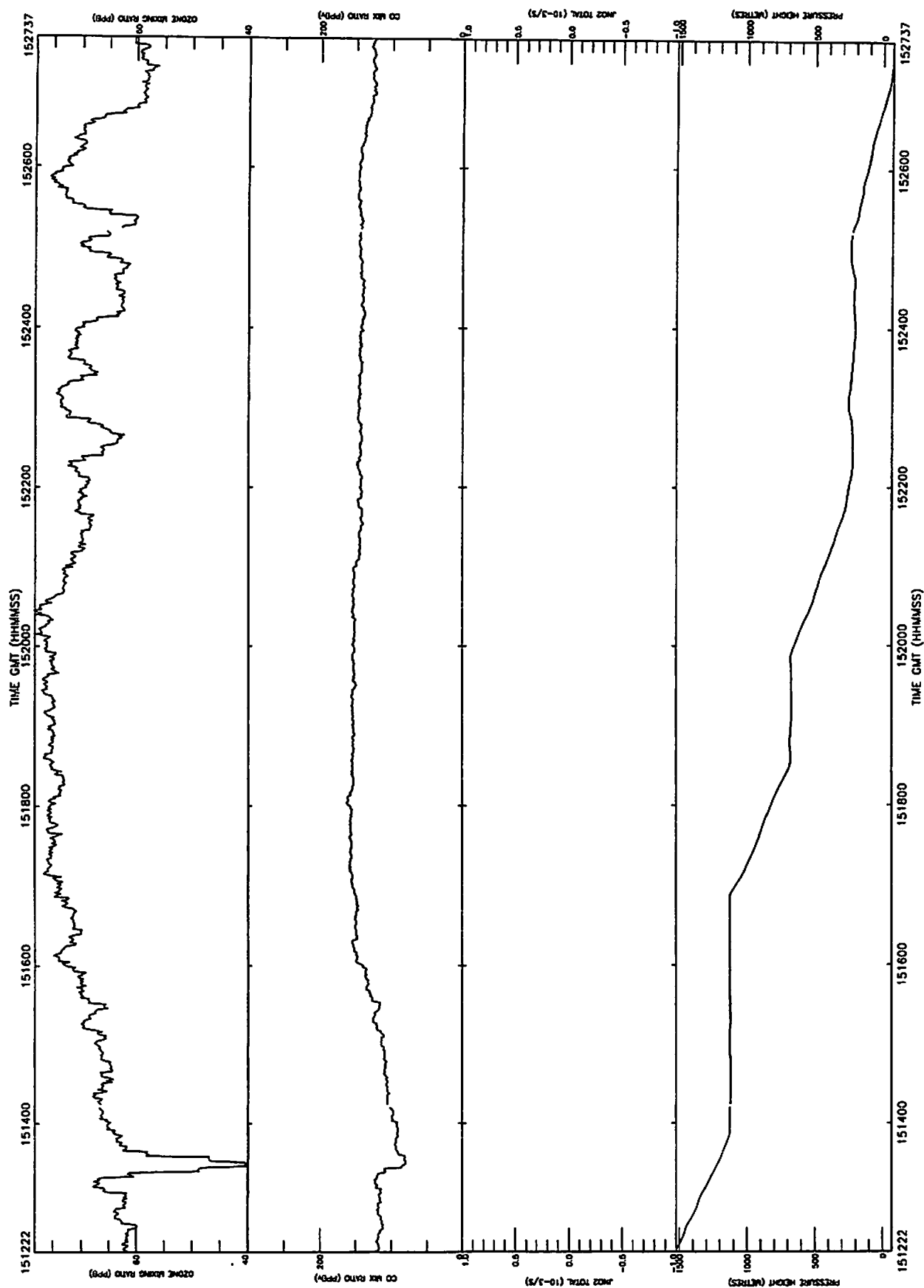


A571 18-AUG-97 P12 5300'-50' From 151222-152737 Plotted 12-Dec-1997 15:09

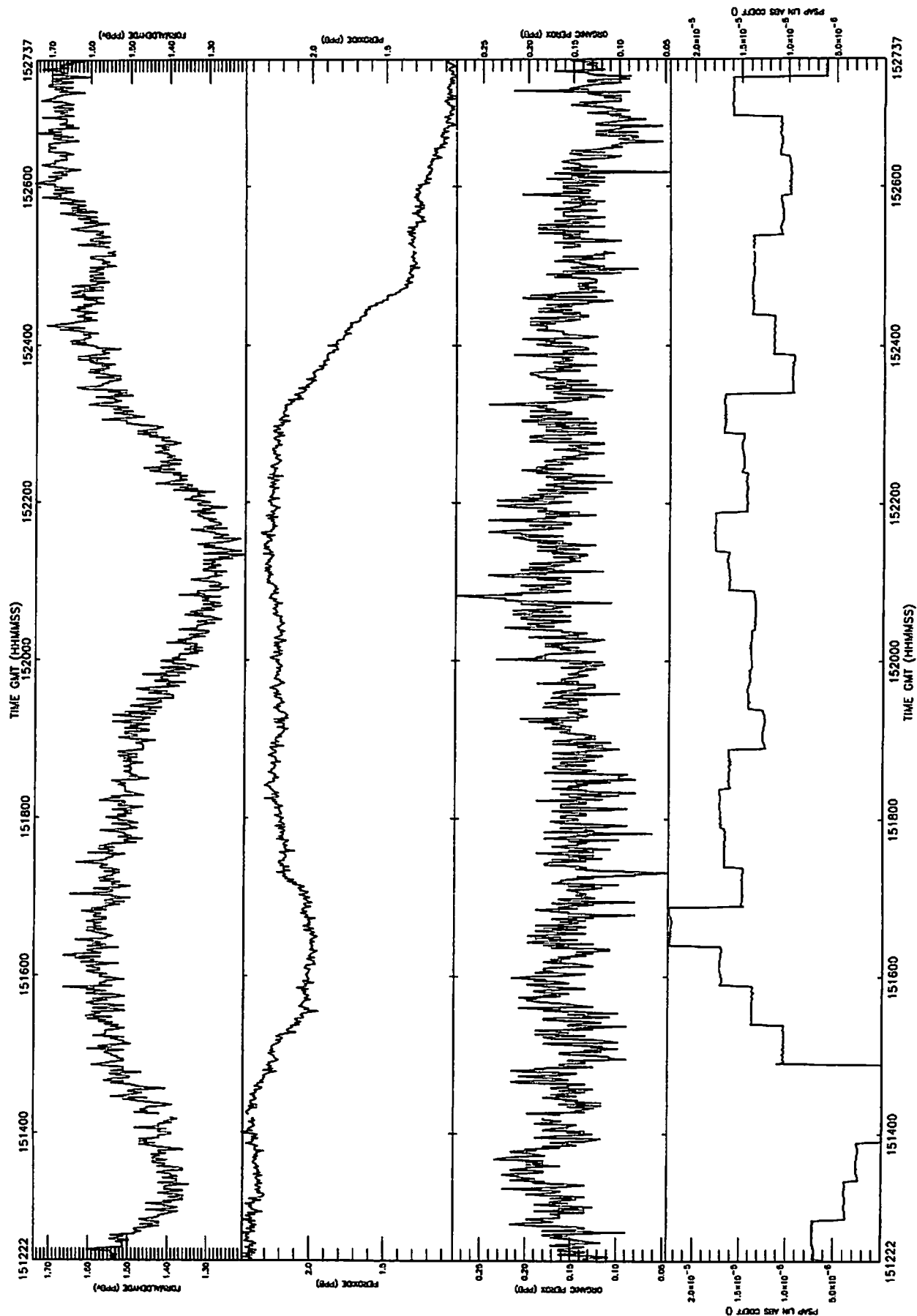




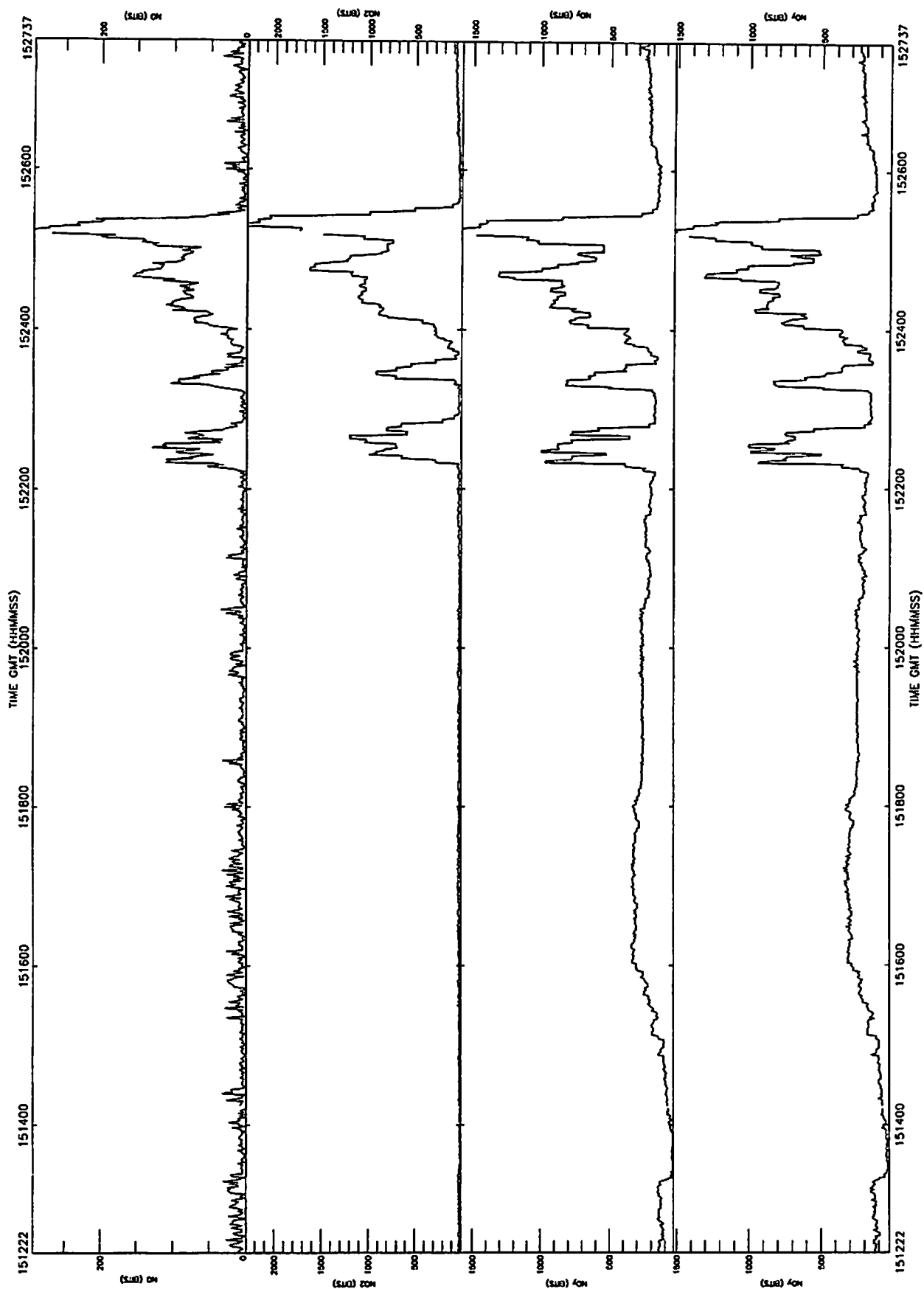
A571 18-AUG-97 P12 5300'-50' From 151222-152737 Plotted 11-Dec-1997 10:05



A571 18-AUG-97 P12 5300'-50' From 151222-152737 Plotted 11-Dec-1997 10:05



A571 18-AUG-97 P12 5300'-50' From 151222-152737 Plotted 11-Dec-1997 10:05



A571 18-AUG-97 P12 5300'-50' From 151222-152737 Plotted 12-Dec-1997 15:09

STATIC PRESSURE (MB)

No of obs 912  
Mean 941.353  
Standard dev 50.5663  
Max value 1021.42  
Min value 843.097

DEICED TRUE TEMP (DEG K)

No of obs 912  
Mean 290.377  
Standard dev 2.75048  
Max value 294.451  
Min value 284.960

DEW POINT (DEG K)

No of obs 912  
Mean 284.691  
Standard dev 5.19103  
Max value 292.755  
Min value 268.867

OZONE MIXING RATIO (PPB)

No of obs 912  
Mean 69.0309  
Standard dev 5.93715  
Max value 78.1899  
Min value 39.9938

PCASP CONCENTRATION (CM-3)

No of obs 912  
Mean 1050.68  
Standard dev 363.191  
Max value 5471.72  
Min value 117.447

FSSP CONCENTRATION (CM-3)

No of obs 912  
Mean 4.637232e-02  
Standard dev 8.775266e-02  
Max value 0.486841  
Min value 0.000000

PRESSURE HEIGHT (METRES)

No of obs 912  
Mean 626.212  
Standard dev 448.796  
Max value 1523.74  
Min value -67.7991

CORRECTED LATITUDE (DEGREES)

No of obs 912  
Mean 55.3653  
Standard dev 8.833746e-02  
Max value 55.5091  
Min value 55.2052

CORRECTED LONGITUDE (DEGREES)

No of obs 912  
Mean 4.51592  
Standard dev 0.367300  
Max value 5.14267  
Min value 3.86500

NORTHWARD WIND COMPT (M S-1)

No of obs 912  
Mean 0.118028  
Standard dev 1.19104  
Max value 2.49294  
Min value -1.86889

EASTWARD WIND COMPT (M S-1)

No of obs 912  
Mean -2.01038  
Standard dev 1.30728  
Max value 0.286713  
Min value -4.13973

VERTICAL WIND COMPT (M S-1)

No of obs 912  
Mean 0.546569  
Standard dev 0.281189  
Max value 1.18470  
Min value -0.297203

WIND SPEED (MS-1)

No of obs 912  
Mean 2.52143  
Standard dev 0.907190  
Max value 4.22927  
Min value 4.575512e-02

WIND DIRECTION (DEG)

Mean 93.3599

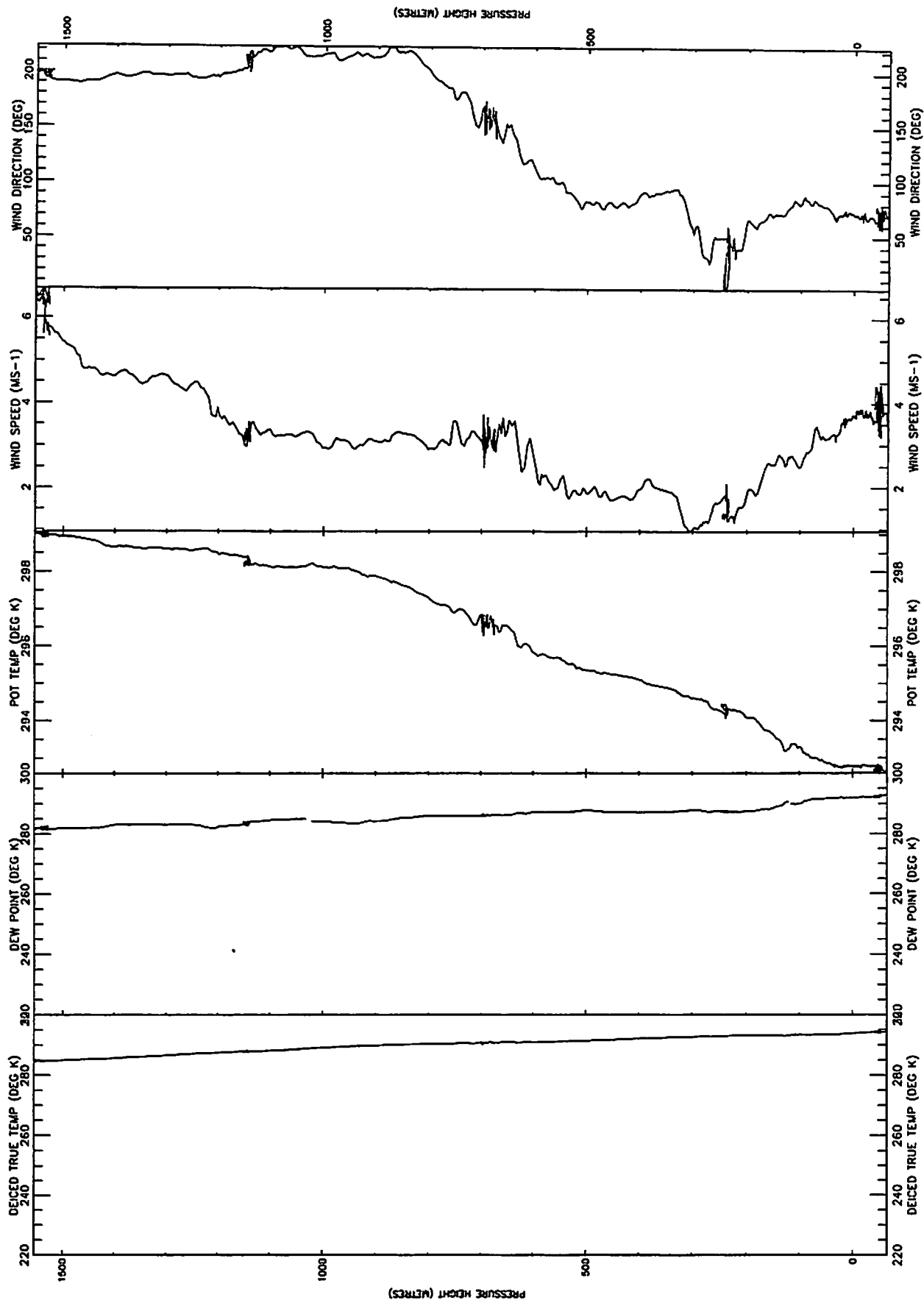
TRUE AIR SPEED (M S-1)

No of obs 912  
Mean 97.6471  
Standard dev 3.16323  
Max value 104.950  
Min value 91.2097

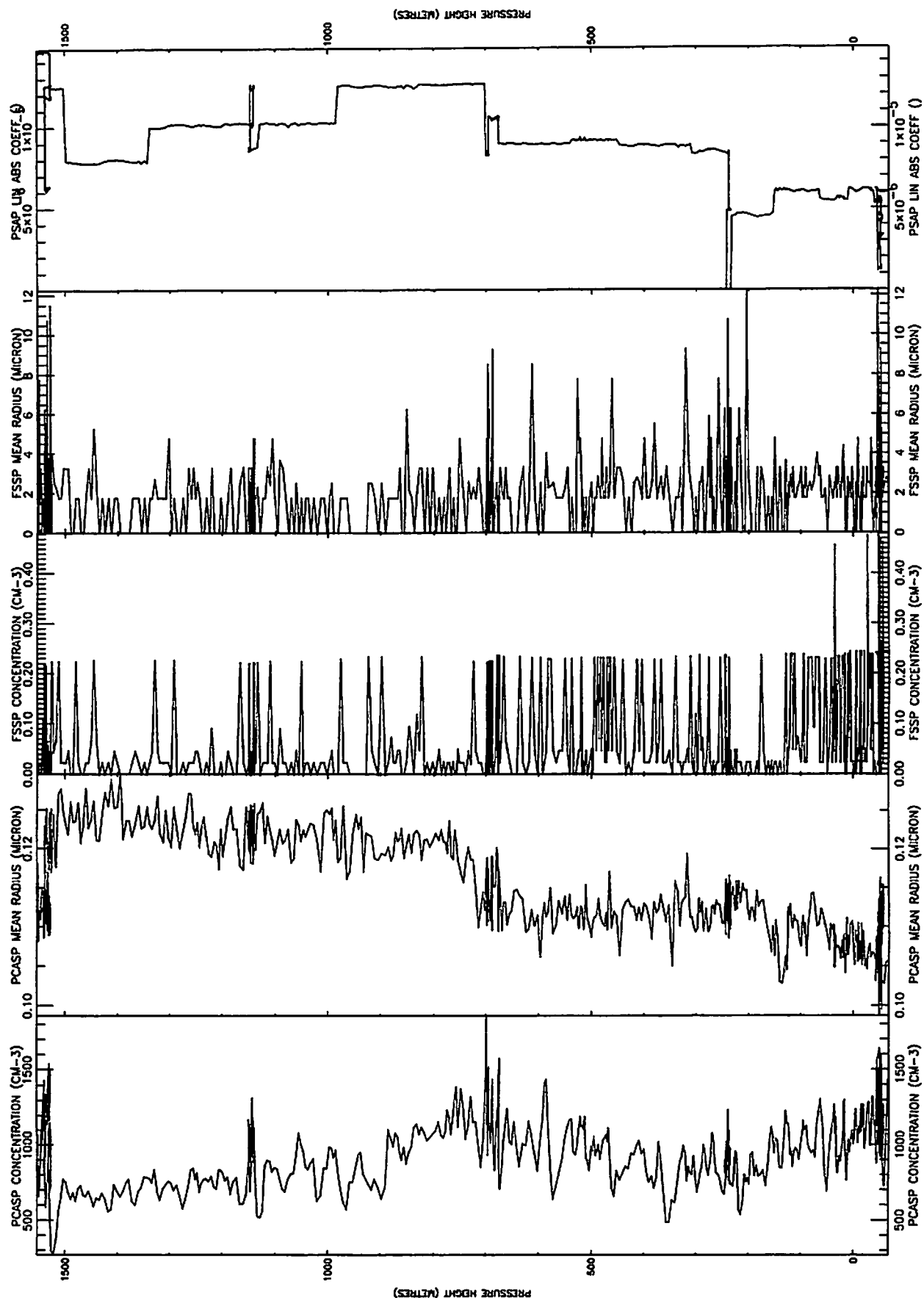
HEADING (DEG)

Mean 67.3438

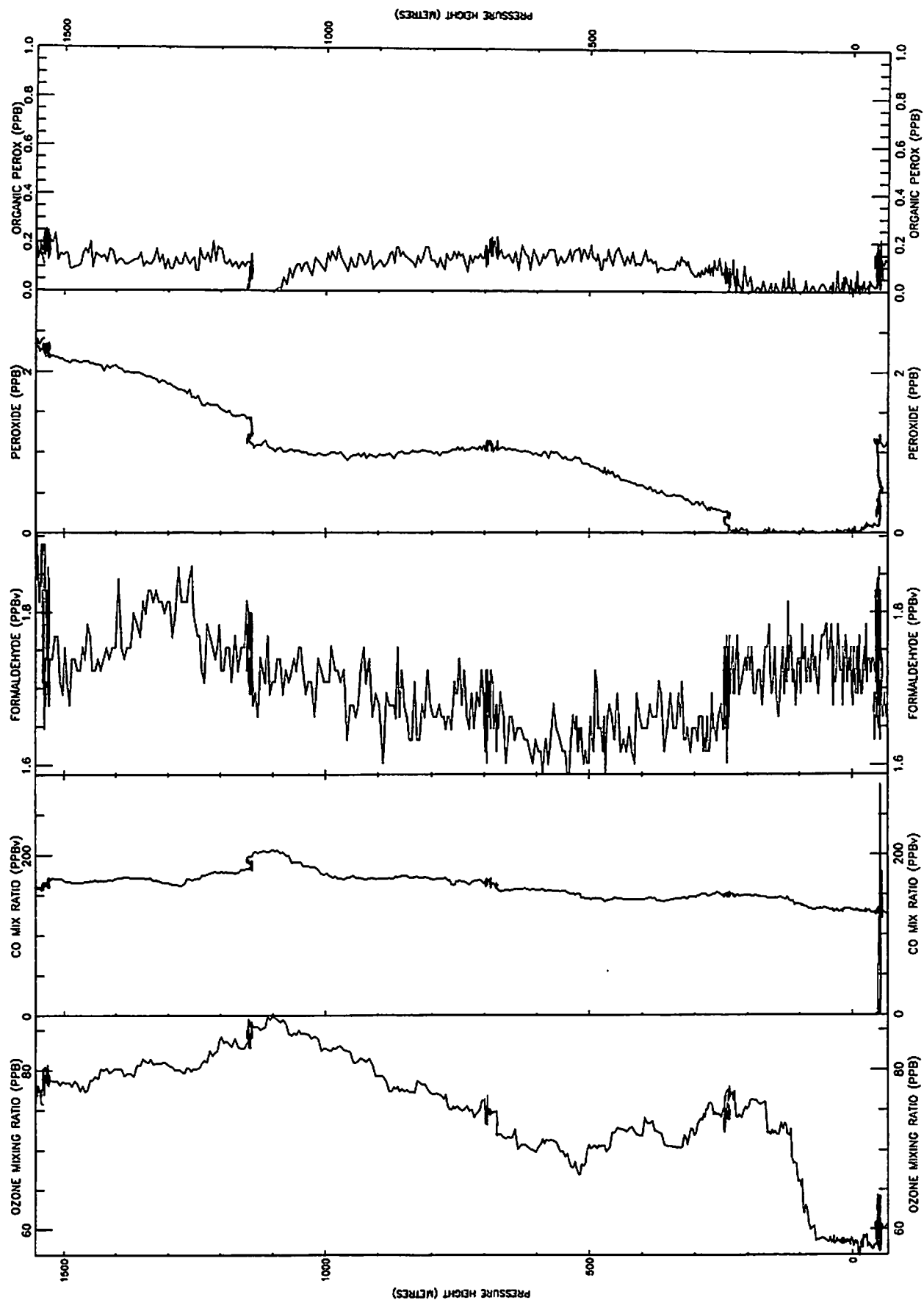
A571 18-AUG-97 P13 50'-5300' From 152737-154353 Plotted 11-Dec-1997 10:11



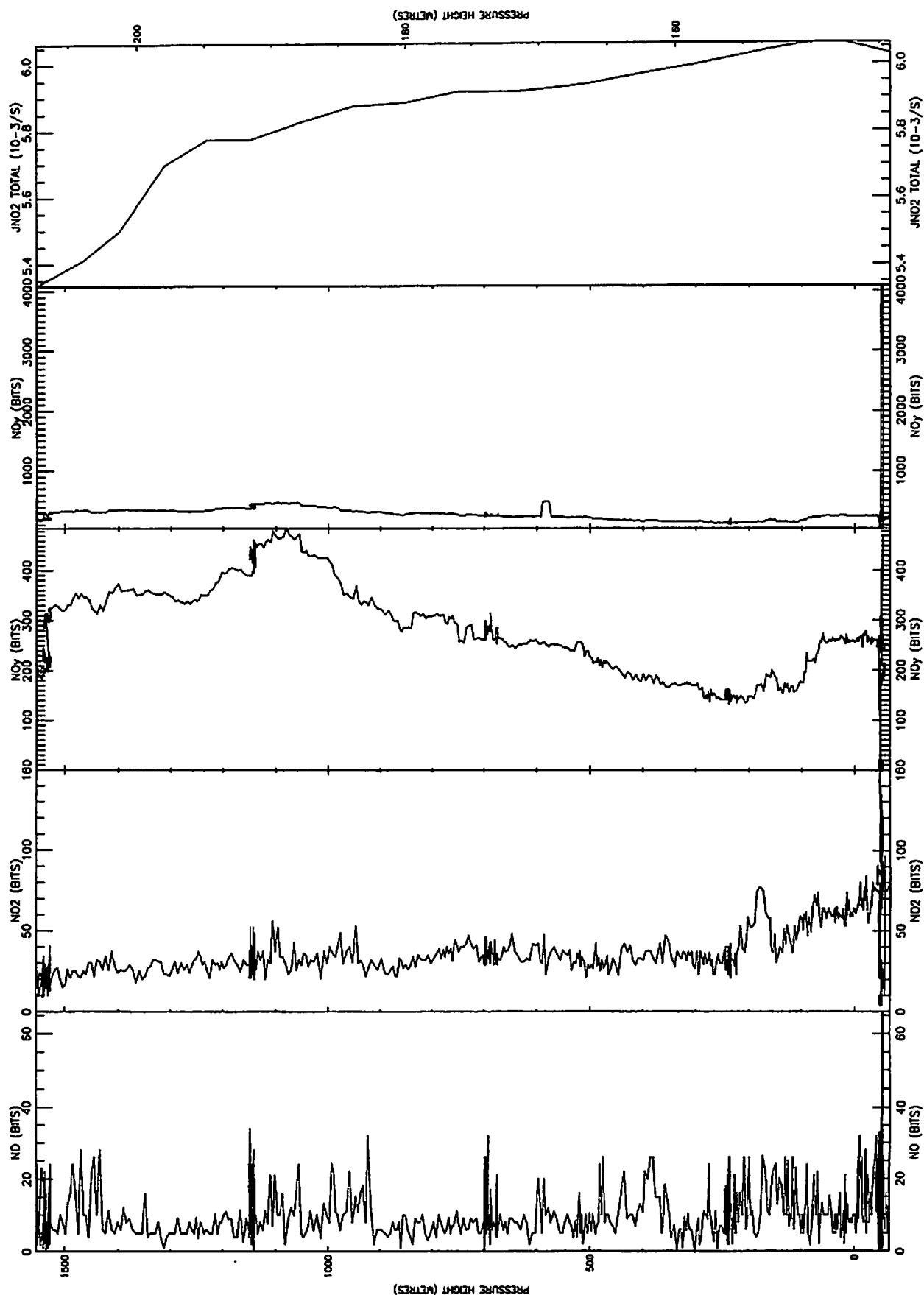
A571 18-AUG-97 P13 50'-5300' From 152737-154353 Plotted 12-Dec-1997 15:13



A571 18-AUG-97 P13 50'-5300' From 152737-154353 Plotted 11-Dec-1997 10:11

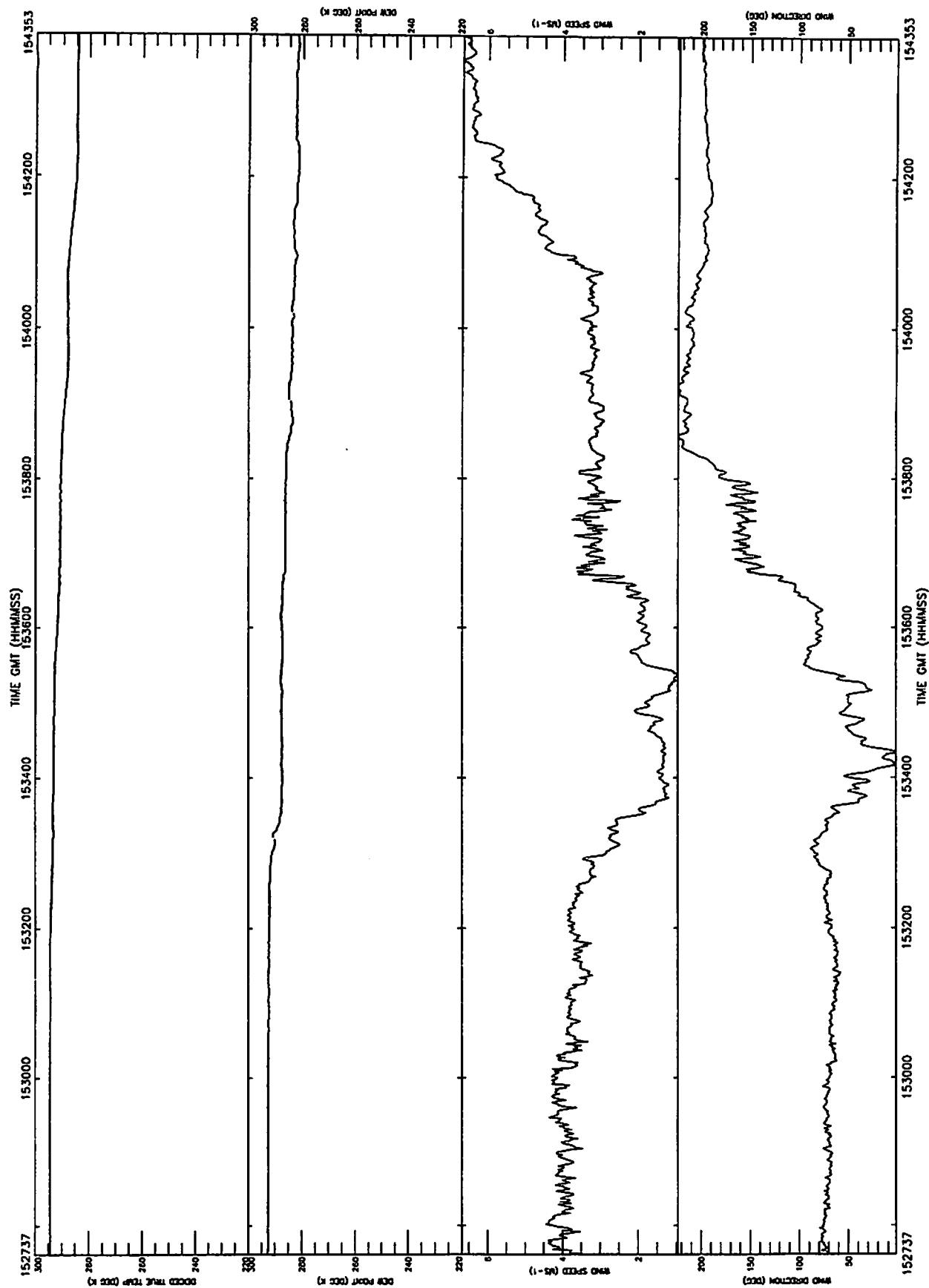


A571 18-AUG-97 P13 50'-5300' From 152737-154353 Plotted 11-Dec-1997 15:25

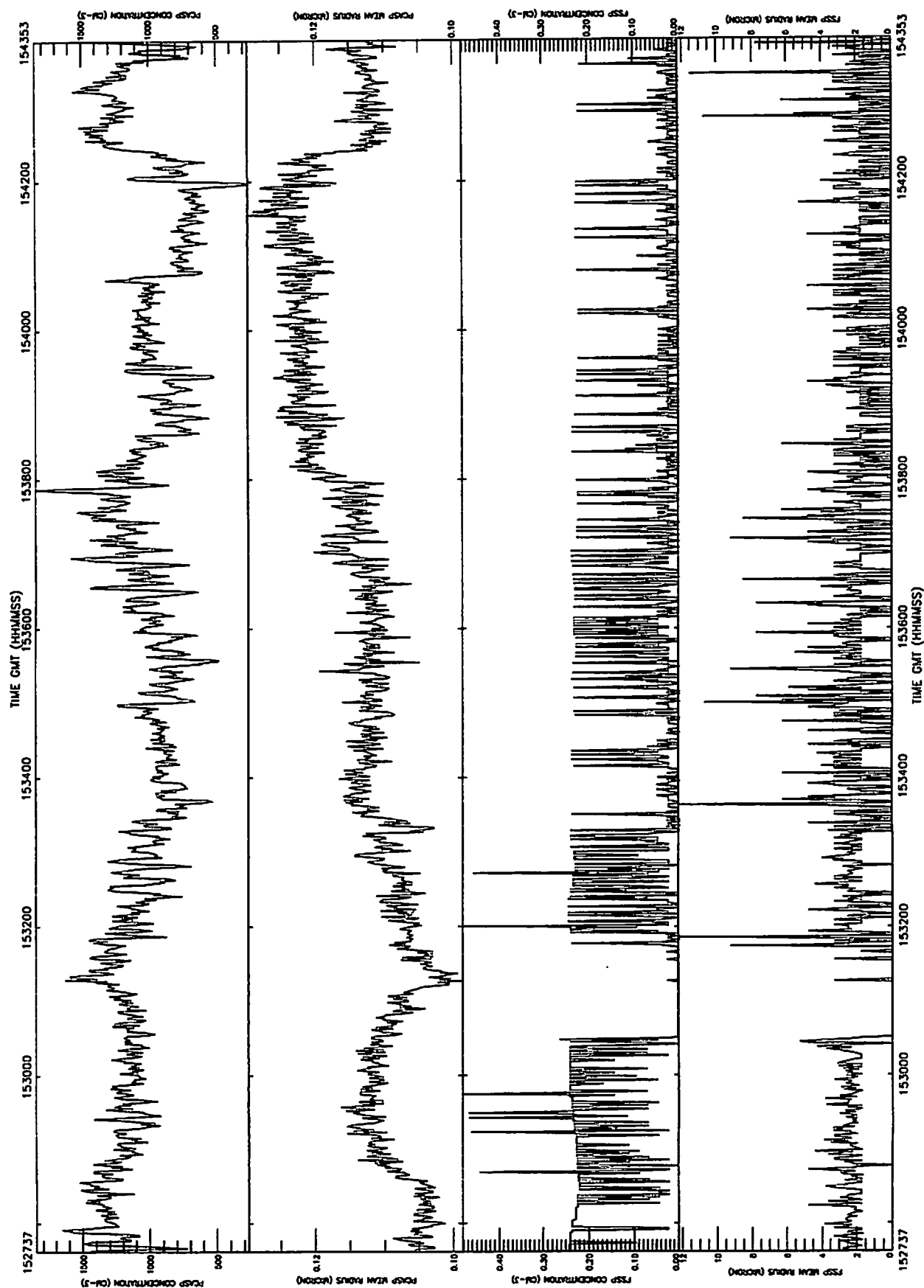




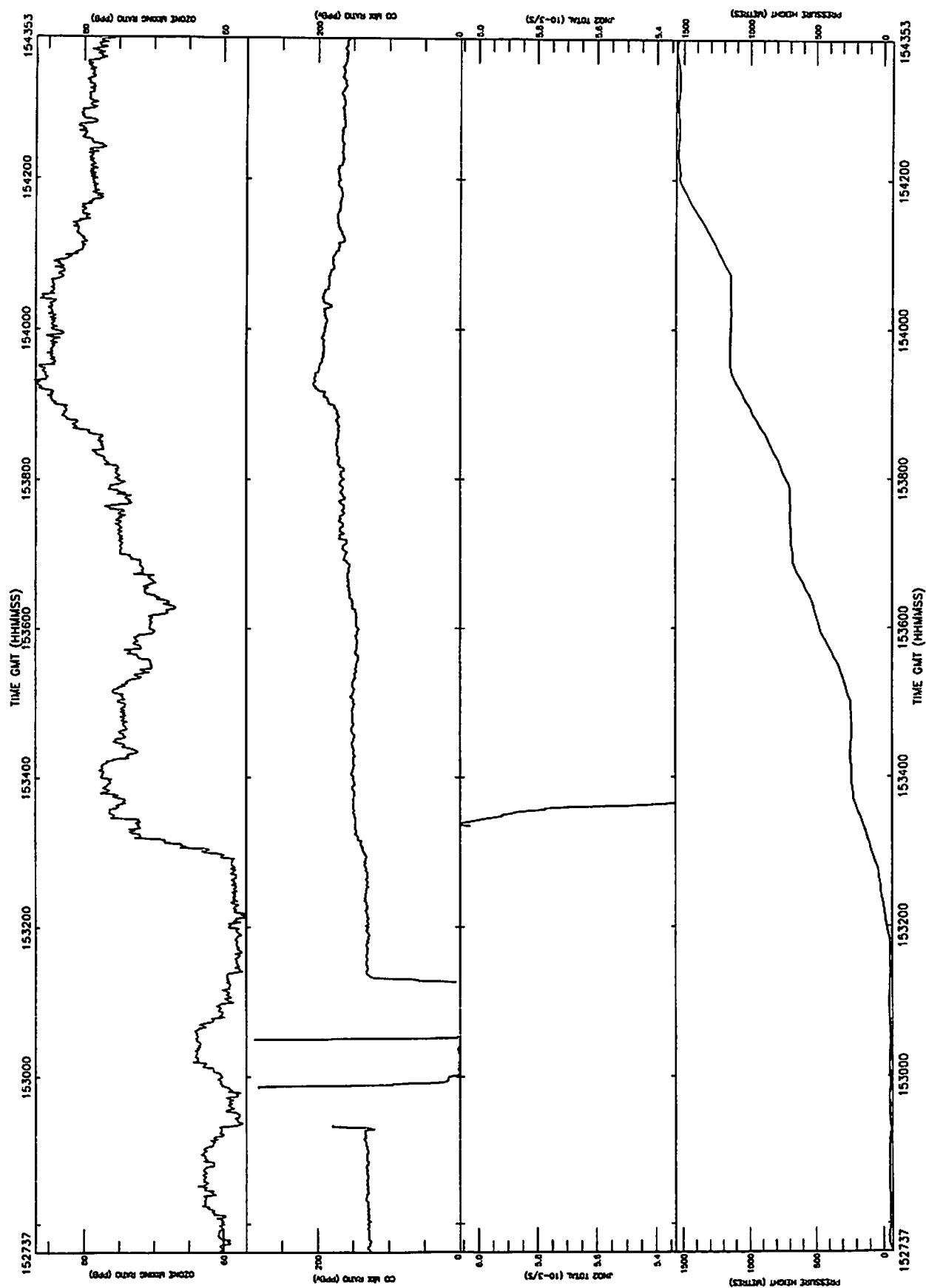
A571 18-AUG-97 P13 50'-5300' From 152737-154353 Plotted 11-Dec-1997 10:11



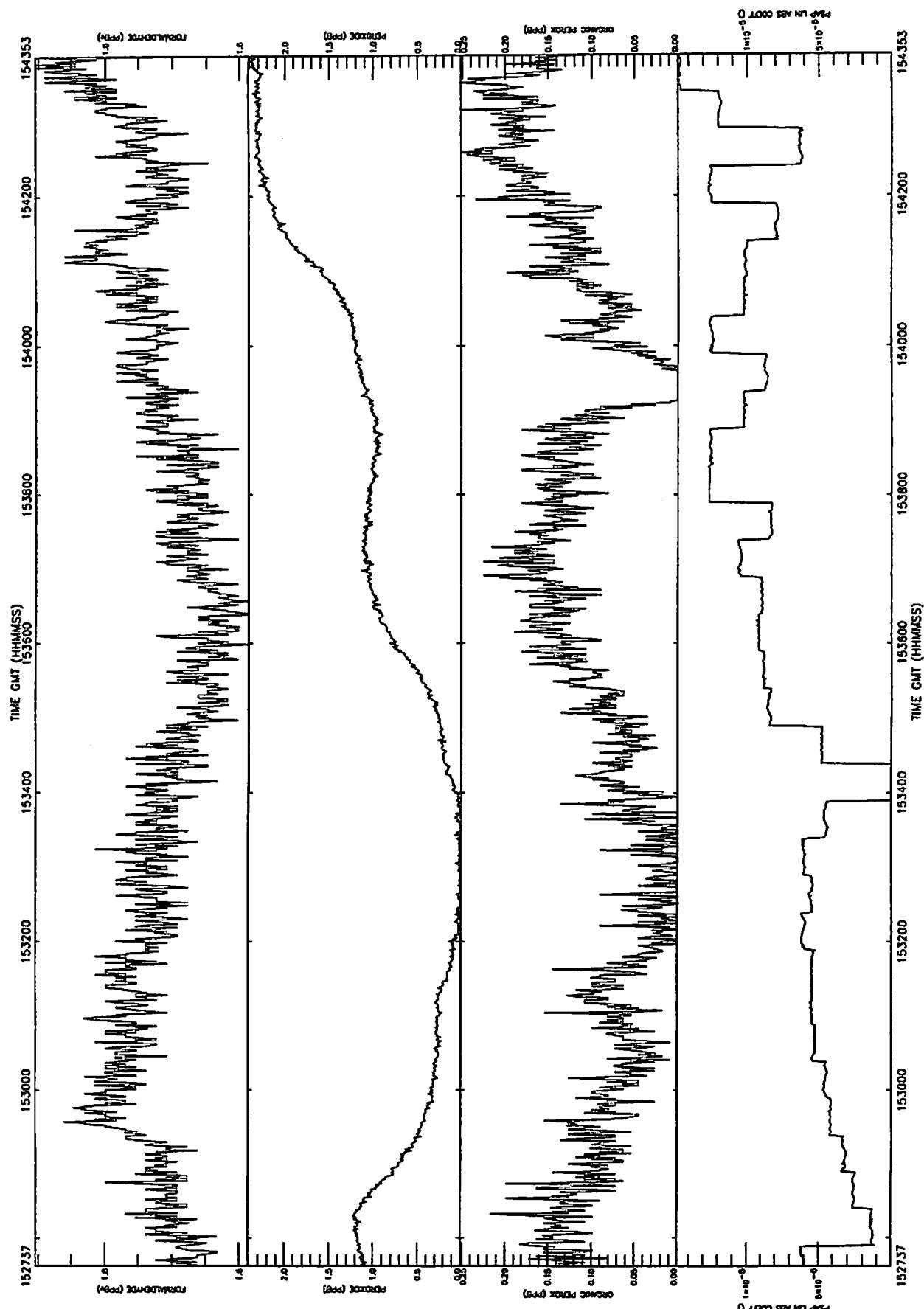
A571 18-AUG-97 P13 50'-5300' From 152737-154353 Plotted 12-Dec-1997 15:13



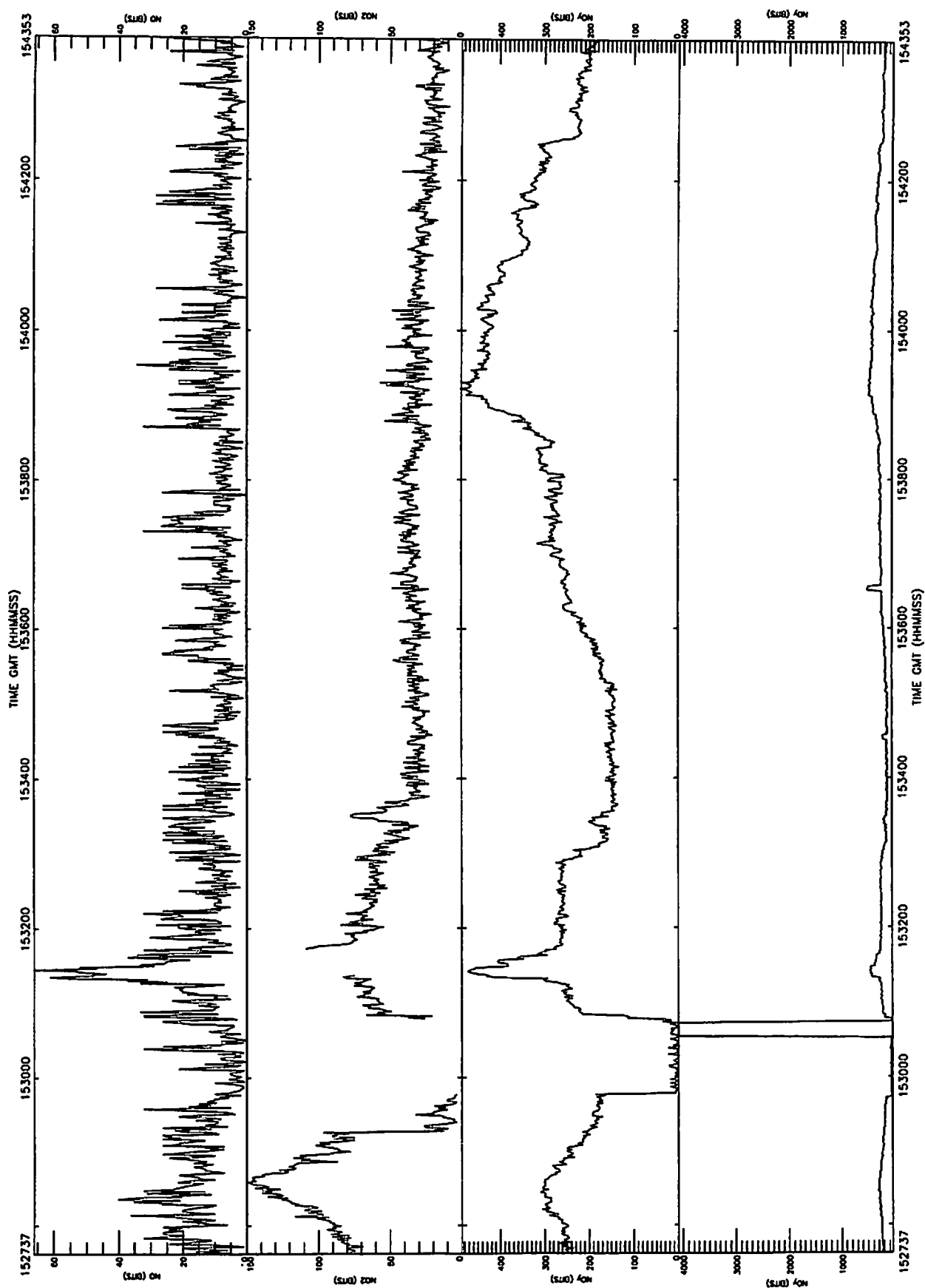
A571 18-AUG-97 P13 50'-5300' From 152737-154353 Plotted 11-Dec-1997 10:11



A571 18-AUG-97 P13 50'-5300' From 152737-154353 Plotted 11-Dec-1997 10:11



A571 18-AUG-97 P13 50'-5300' From 152737-154353 Plotted 11-Dec-1997 15:25



A571 18-AUG-97 P13 50'-5300' From 152737-154353 Plotted 12-Dec-1997 15:13

STATIC PRESSURE (MB)

No of obs 977  
Mean 948.704  
Standard dev 65.3702  
Max value 1021.22  
Min value 839.943

DEICED TRUE TEMP (DEG K)

No of obs 977  
Mean 290.920  
Standard dev 3.41401  
Max value 294.442  
Min value 284.527

DEW POINT (DEG K)

No of obs 977  
Mean 287.459  
Standard dev 3.89714  
Max value 292.755  
Min value 281.460

OZONE MIXING RATIO (PPB)

No of obs 977  
Mean 71.6586  
Standard dev 9.01758  
Max value 86.8440  
Min value 56.7514

PCASP CONCENTRATION (CM-3)

No of obs 977  
Mean 1052.17  
Standard dev 228.229  
Max value 1854.21  
Min value 269.646

FSSP CONCENTRATION (CM-3)

No of obs 977  
Mean 7.184496e-02  
Standard dev 9.646642e-02  
Max value 0.481549  
Min value 0.000000

PRESSURE HEIGHT (METRES)

No of obs 977  
Mean 568.001  
Standard dev 581.328  
Max value 1554.25  
Min value -66.1161

CORRECTED LATITUDE (DEGREES)

No of obs 977  
Mean 55.6596  
Standard dev 9.163661e-02  
Max value 55.8284  
Min value 55.5091

CORRECTED LONGITUDE (DEGREES)

No of obs 977  
Mean 5.81713  
Standard dev 0.397957  
Max value 6.52951  
Min value 5.14267

NORTHWARD WIND COMPT (M S-1)

No of obs 977  
Mean 1.14271  
Standard dev 2.65740  
Max value 6.36284  
Min value -1.87668

EASTWARD WIND COMPT (M S-1)

No of obs 977  
Mean -1.05194  
Standard dev 2.19334  
Max value 2.21338  
Min value -4.27561

VERTICAL WIND COMPT (M S-1)

No of obs 977  
Mean -0.286943  
Standard dev 0.367261  
Max value 0.698723  
Min value -1.14994

WIND SPEED (MS-1)

No of obs 977  
Mean 3.53017  
Standard dev 1.34627  
Max value 6.68637  
Min value 0.955130

WIND DIRECTION (DEG)

Mean 137.368

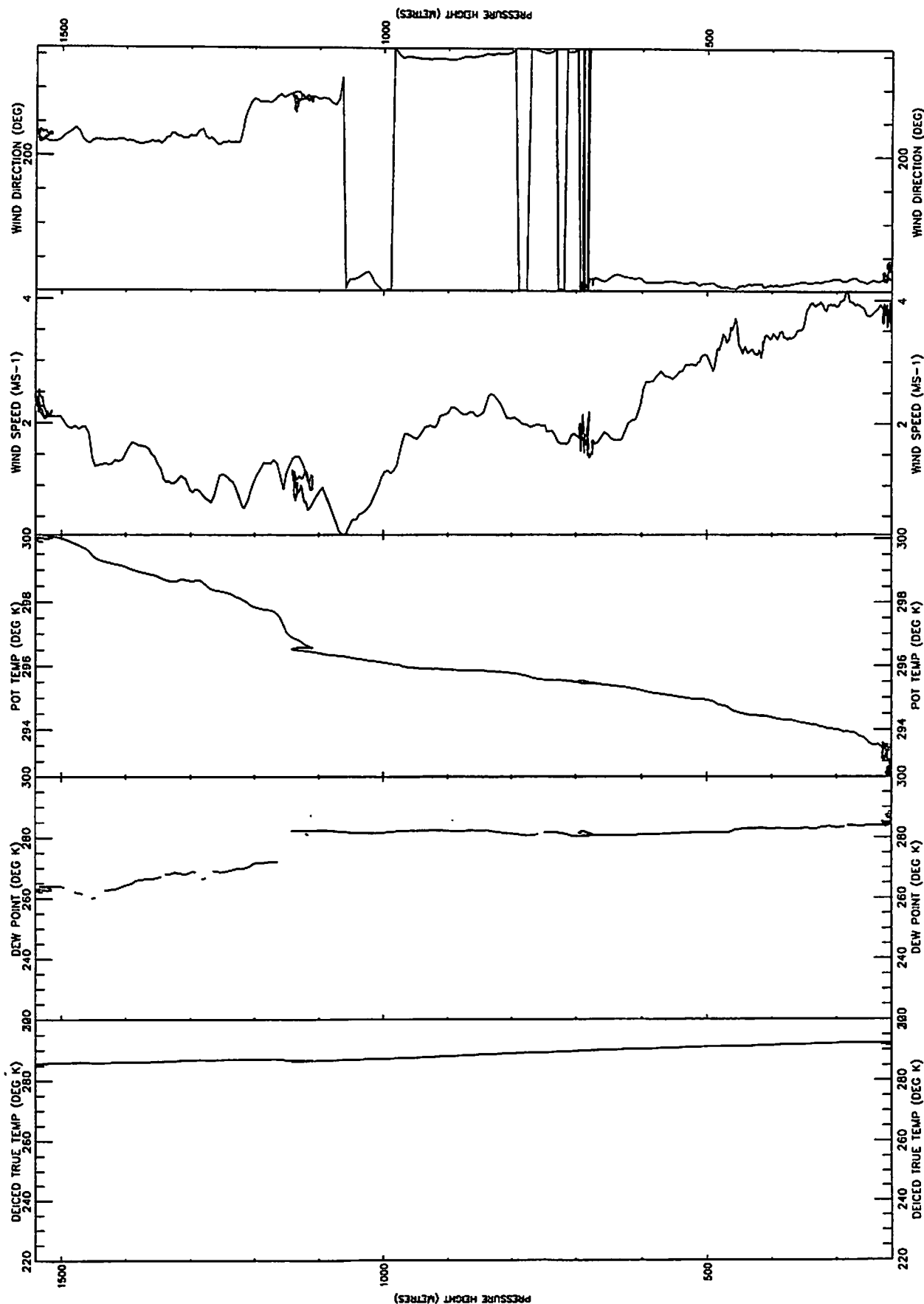
TRUE AIR SPEED (M S-1)

No of obs 977  
Mean 96.9947  
Standard dev 3.36546  
Max value 111.036  
Min value 90.4234

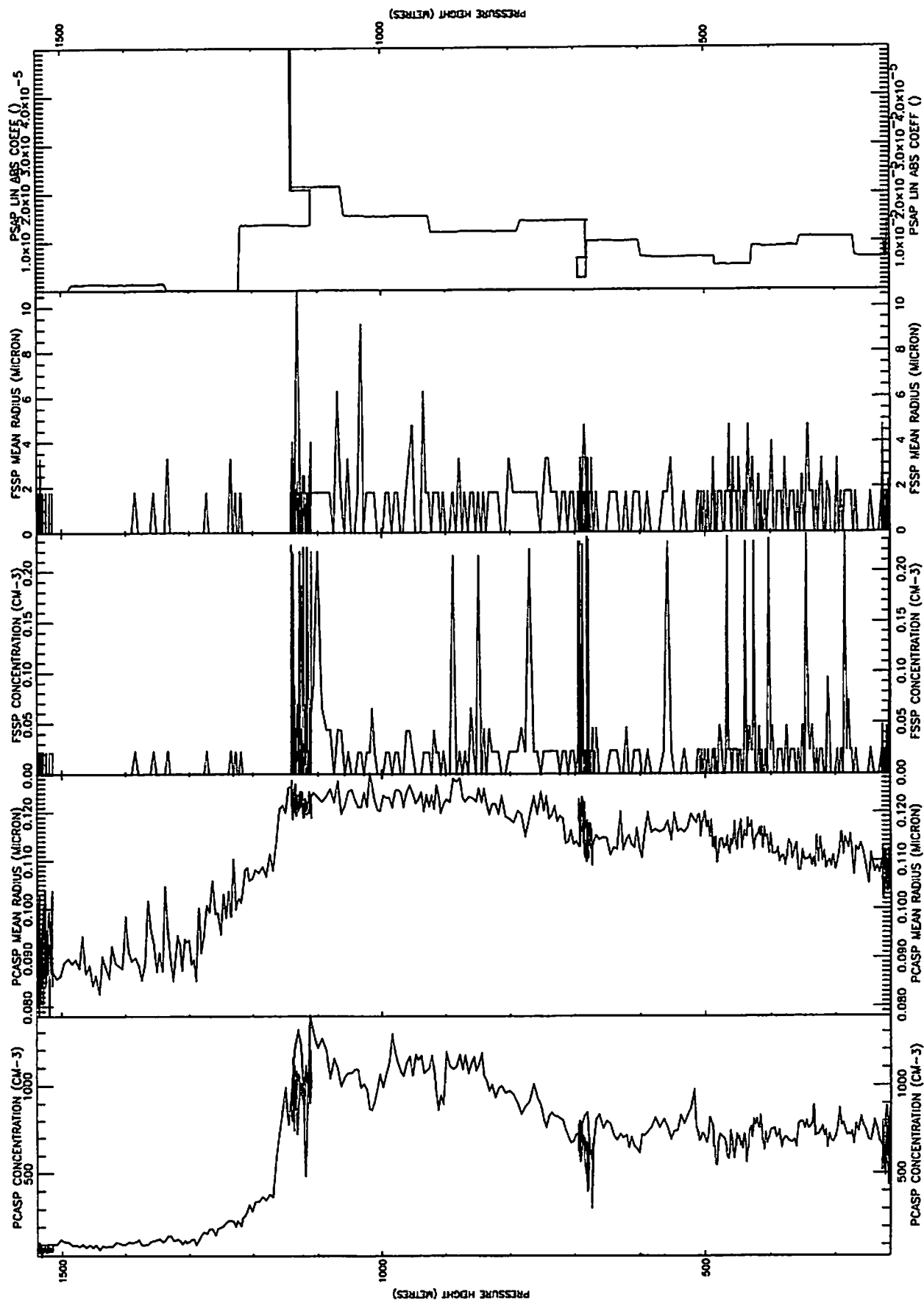
HEADING (DEG)

Mean 67.8508

A571 18-AUG-97 P14 5300'-50' From 155740-160903 Plotted 11-Dec-1997 10:15

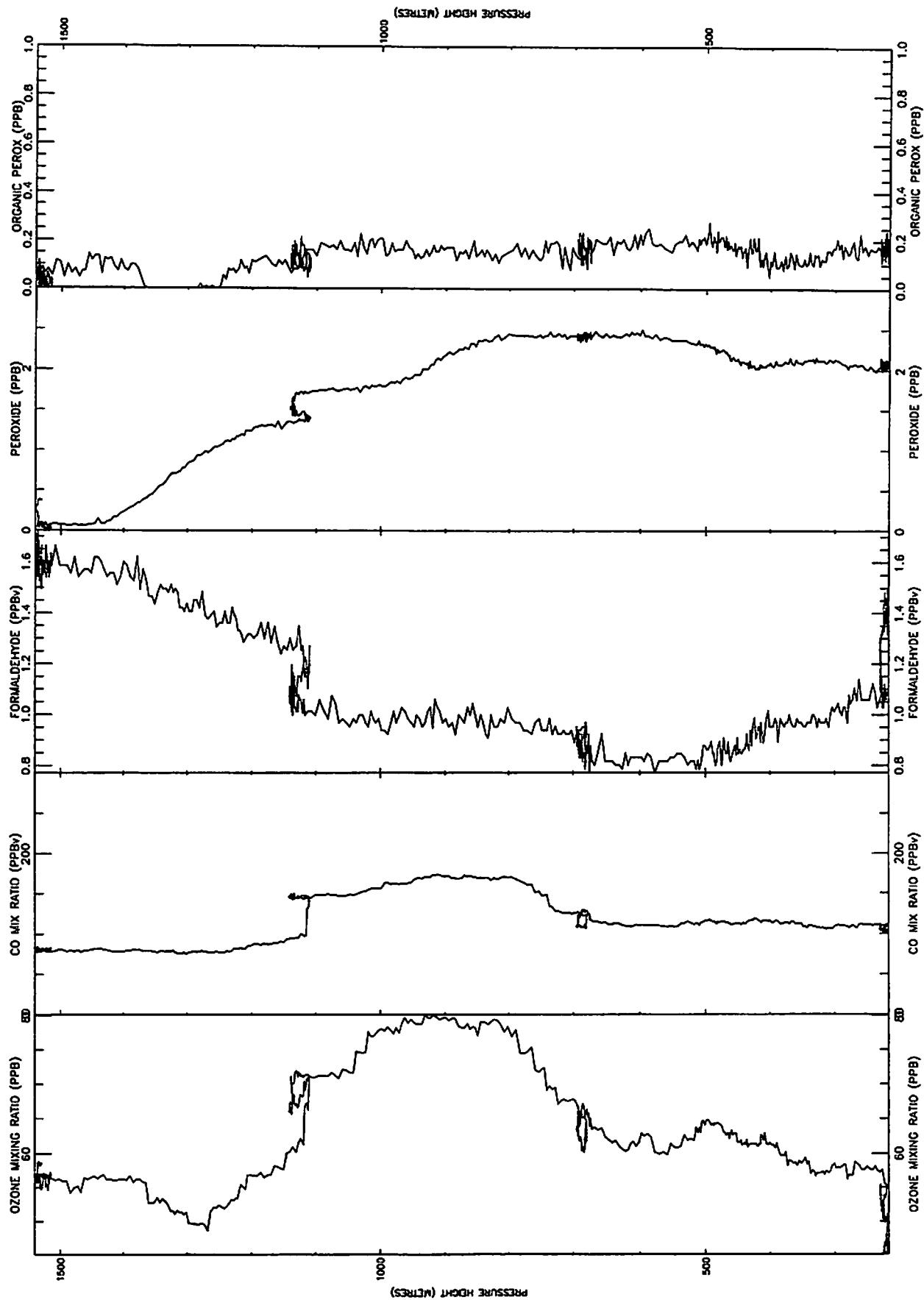


A571 18-AUG-97 P14 5300'-50' From 155740-160903 Plotted 12-Dec-1997 15:15

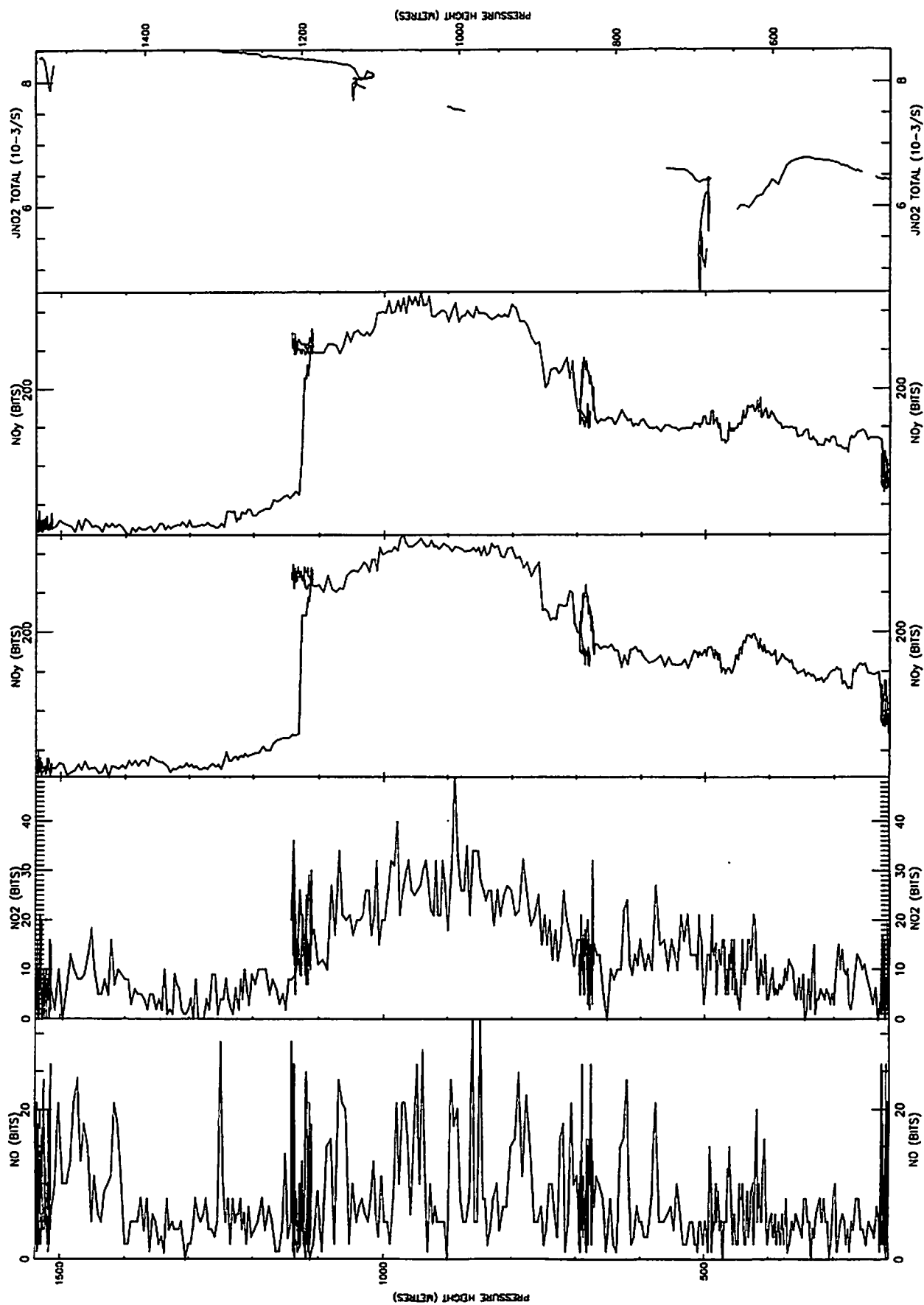




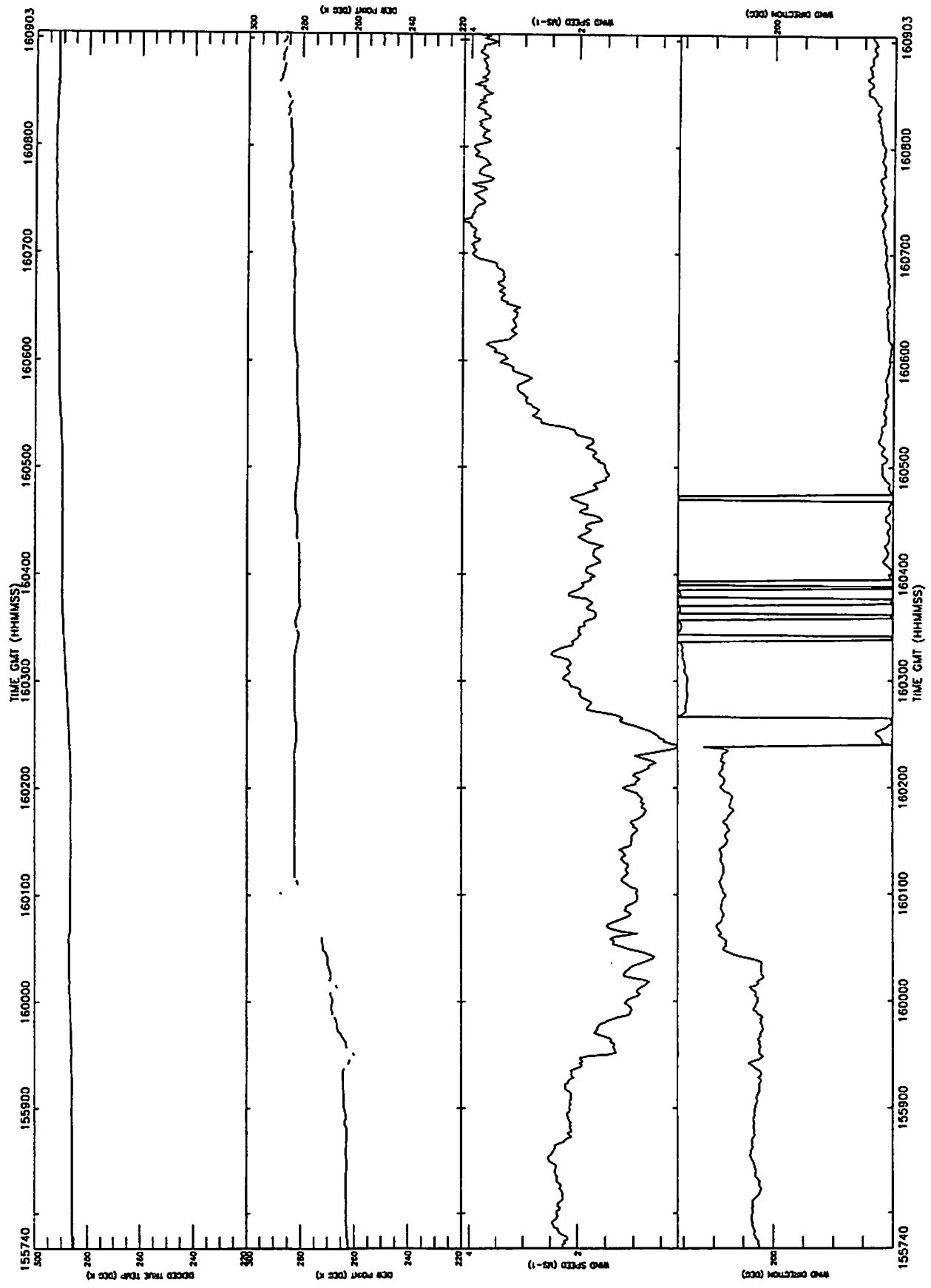
A571 18-AUG-97 P14 5300'-50' From 155740-160903 Plotted 11-Dec-1997 10:16



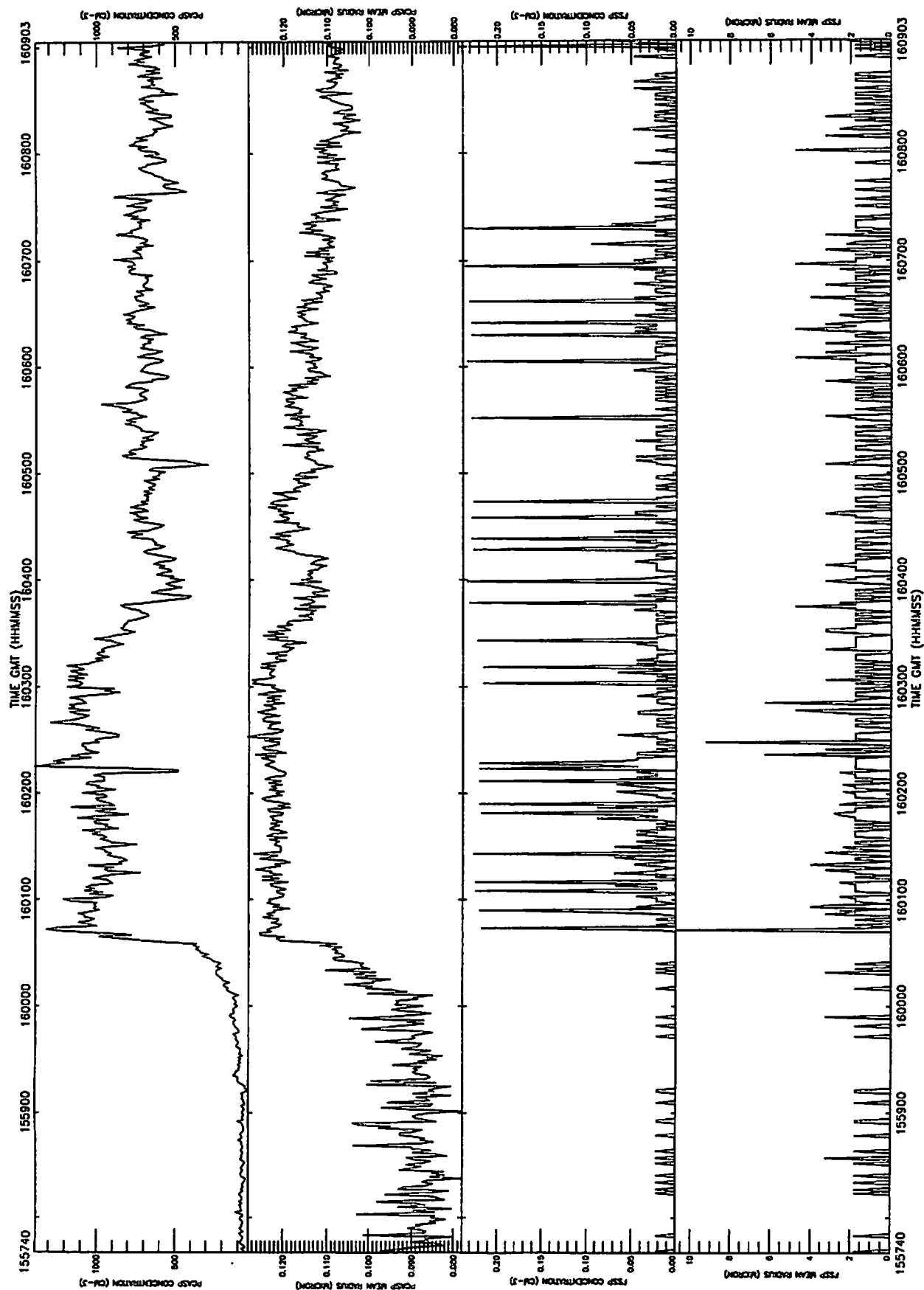
A571 18-AUG-97 P14 5300'-50' From 155740-160903 Plotted 11-Dec-1997 10:16



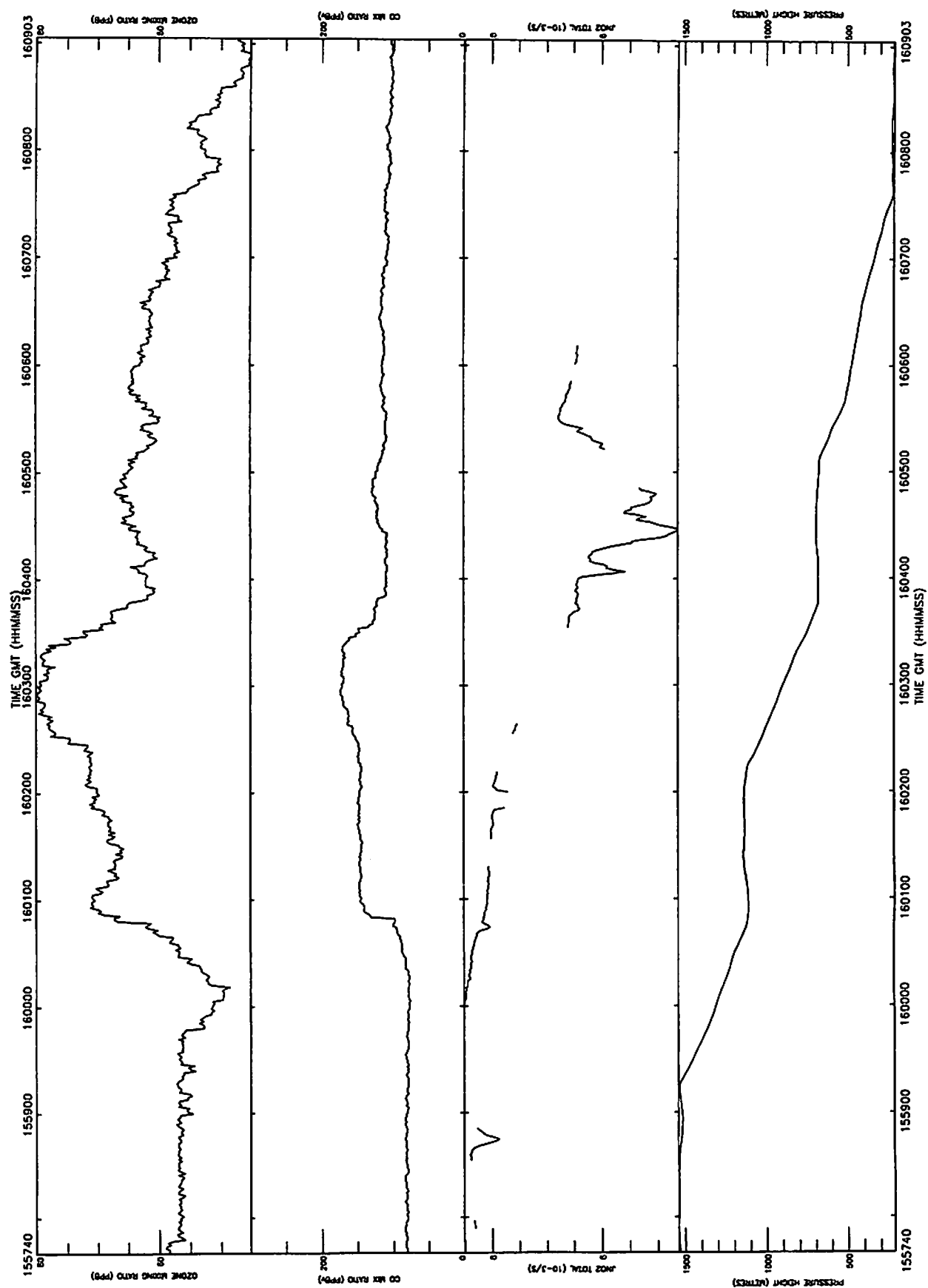
A571 18-AUG-97 P14 5300'-50' From 155740-160903 Plotted 11-Dec-1997 10:16



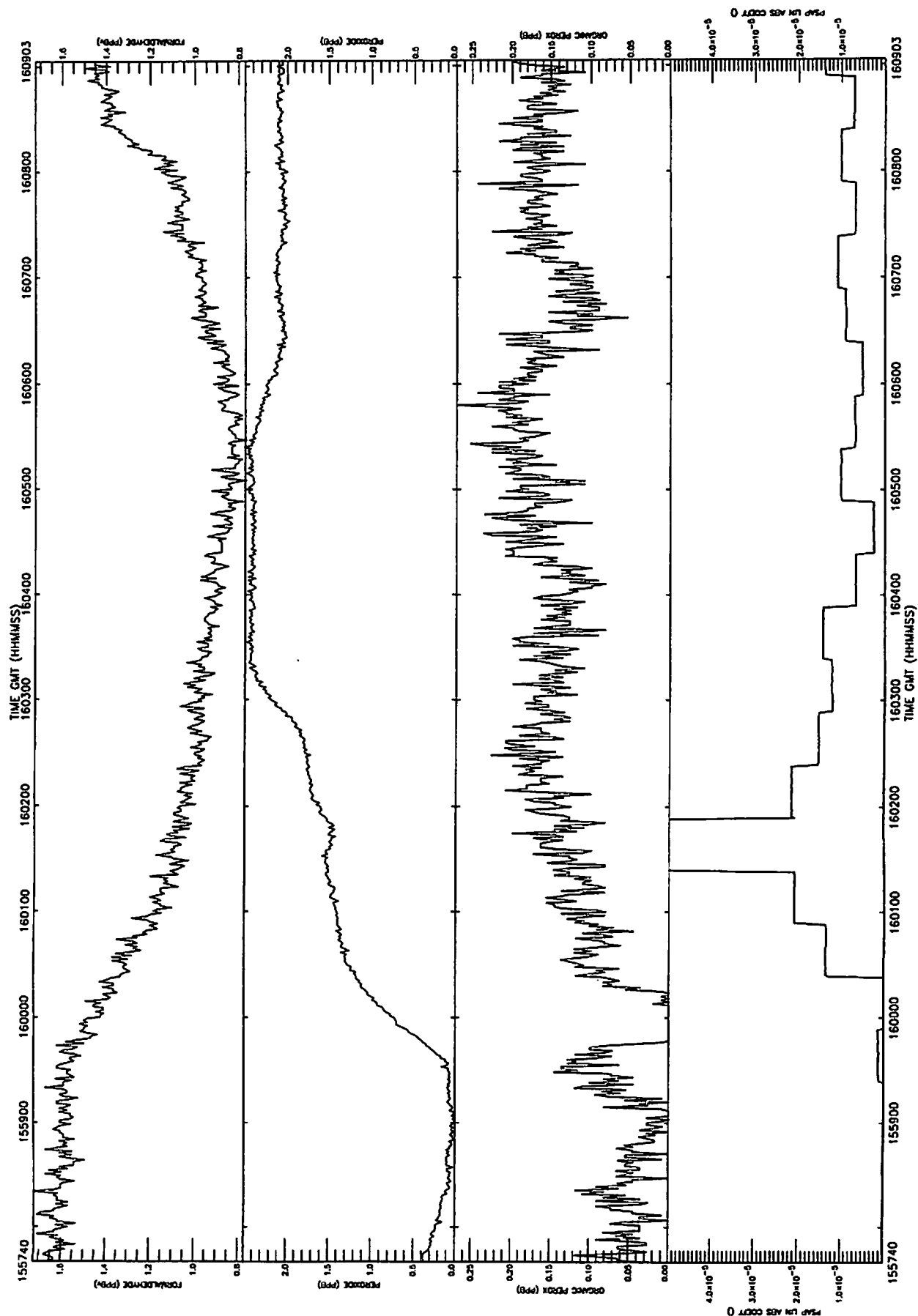
A571 18-AUG-97 P14 5300'-50' From 155740-160903 Plotted 12-Dec-1997 15:15



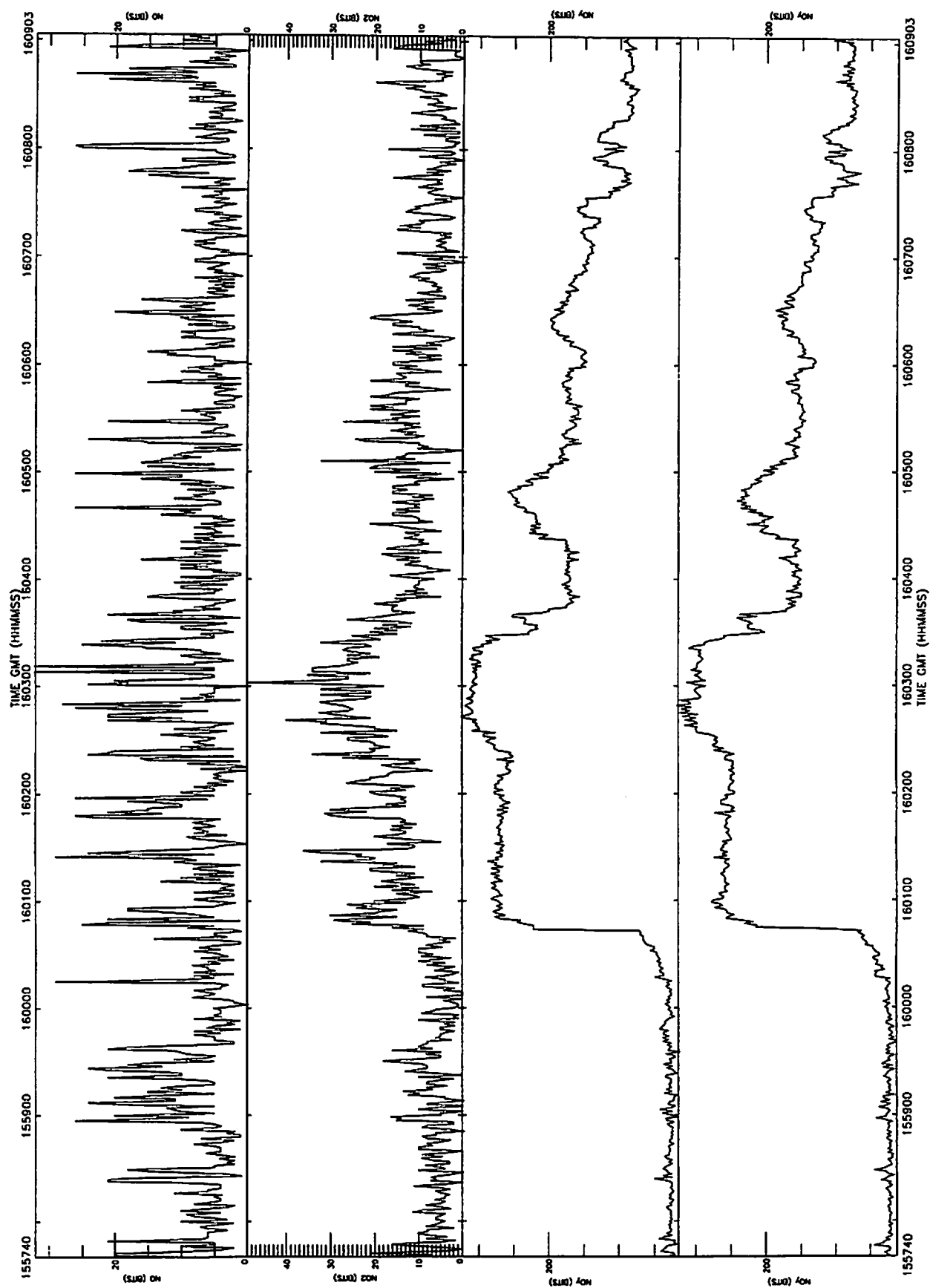
A571 18-AUG-97 P14 5300'-50' From 155740-160903 Plotted 11-Dec-1997 10:16



A571 18-AUG-97 P14 5300'-50' From 155740-160903 Plotted 11-Dec-1997 10:16



A571 18-AUG-97 P14 5300'-50' From 155740-160903 Plotted 11-Dec-1997 10:16



A571 18-AUG-97 P14 5300'-50' From 155740-160903 Plotted 12-Dec-1997 15:15

STATIC PRESSURE (MB)

No of obs 684  
Mean 915.407  
Standard dev 49.6639  
Max value 987.589  
Min value 841.455

DEICED TRUE TEMP (DEG K)

No of obs 684  
Mean 288.706  
Standard dev 2.43956  
Max value 292.423  
Min value 285.518

DEW POINT (DEG K)

No of obs 684  
Mean 277.904  
Standard dev 8.07055  
Max value 288.372  
Min value 260.107

OZONE MIXING RATIO (PPB)

No of obs 684  
Mean 61.4114  
Standard dev 8.04181  
Max value 80.0904  
Min value 45.2525

PCASP CONCENTRATION (CM-3)

No of obs 684  
Mean 615.785  
Standard dev 340.029  
Max value 1387.94  
Min value 35.0490

FSSP CONCENTRATION (CM-3)

No of obs 684  
Mean 2.054192e-02  
Standard dev 4.490712e-02  
Max value 0.238155  
Min value 0.000000

PRESSURE HEIGHT (METRES)

No of obs 684  
Mean 858.157  
Standard dev 449.738  
Max value 1539.61  
Min value 215.832

CORRECTED LATITUDE (DEGREES)

No of obs 684  
Mean 56.6416  
Standard dev 6.878541e-02  
Max value 56.7597  
Min value 56.5237

CORRECTED LONGITUDE (DEGREES)

No of obs 684  
Mean 5.85347  
Standard dev 0.294086  
Max value 6.36565  
Min value 5.34903

NORTHWARD WIND COMPT (M S-1)

No of obs 684  
Mean -1.25889  
Standard dev 1.79545  
Max value 1.77423  
Min value -3.98997

EASTWARD WIND COMPT (M S-1)

No of obs 684  
Mean 0.134714  
Standard dev 1.11853  
Max value 2.13965  
Min value -2.71233

VERTICAL WIND COMPT (M S-1)

No of obs 684  
Mean 0.465516  
Standard dev 0.244044  
Max value 1.05924  
Min value -0.143791

WIND SPEED (MS-1)

No of obs 684  
Mean 2.23722  
Standard dev 1.03323  
Max value 4.13962  
Min value 0.199022

WIND DIRECTION (DEG)

Mean 353.892

TRUE AIR SPEED (M S-1)

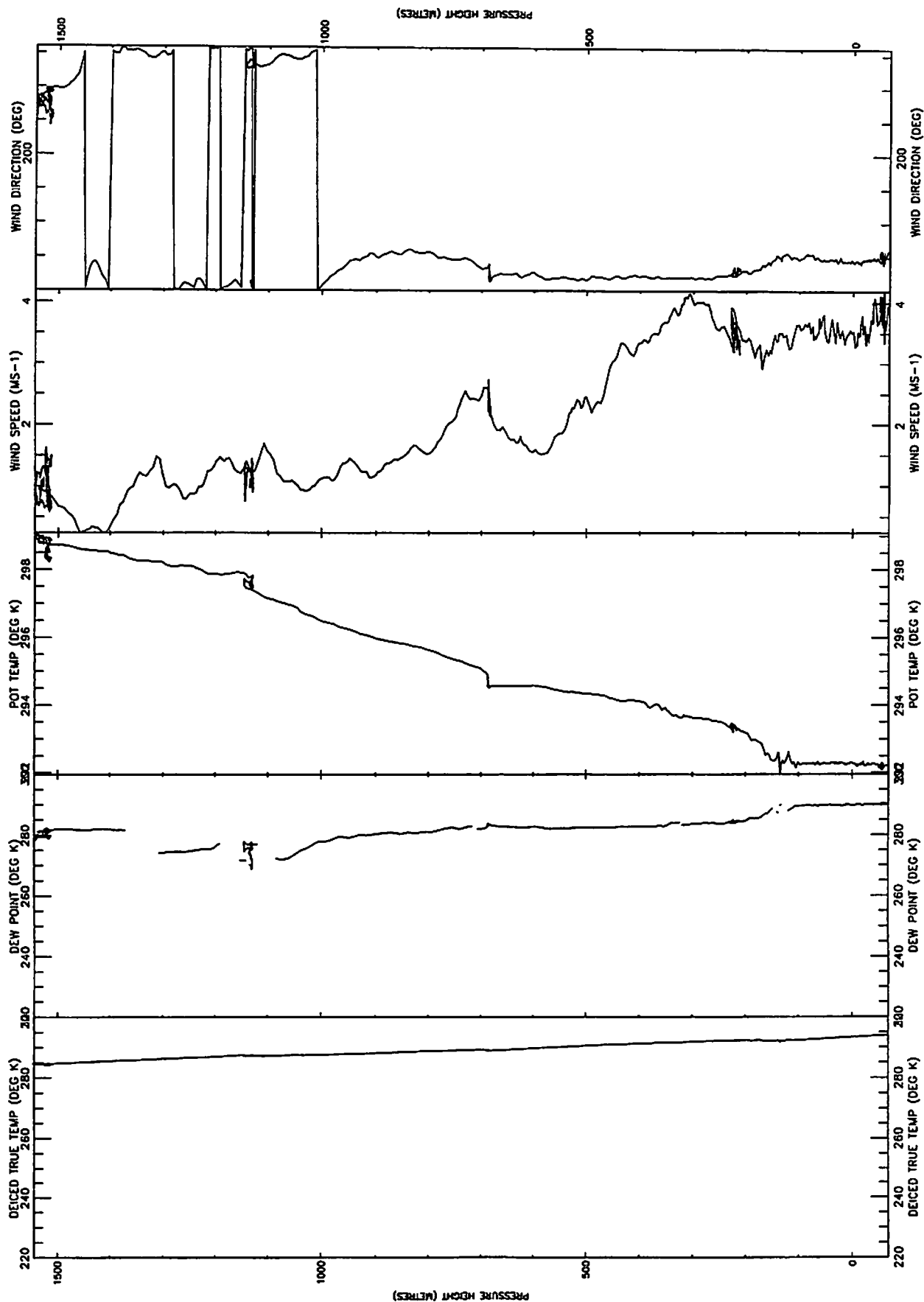
No of obs 684  
Mean 98.5796  
Standard dev 3.14669  
Max value 103.516  
Min value 92.2995

HEADING (DEG)

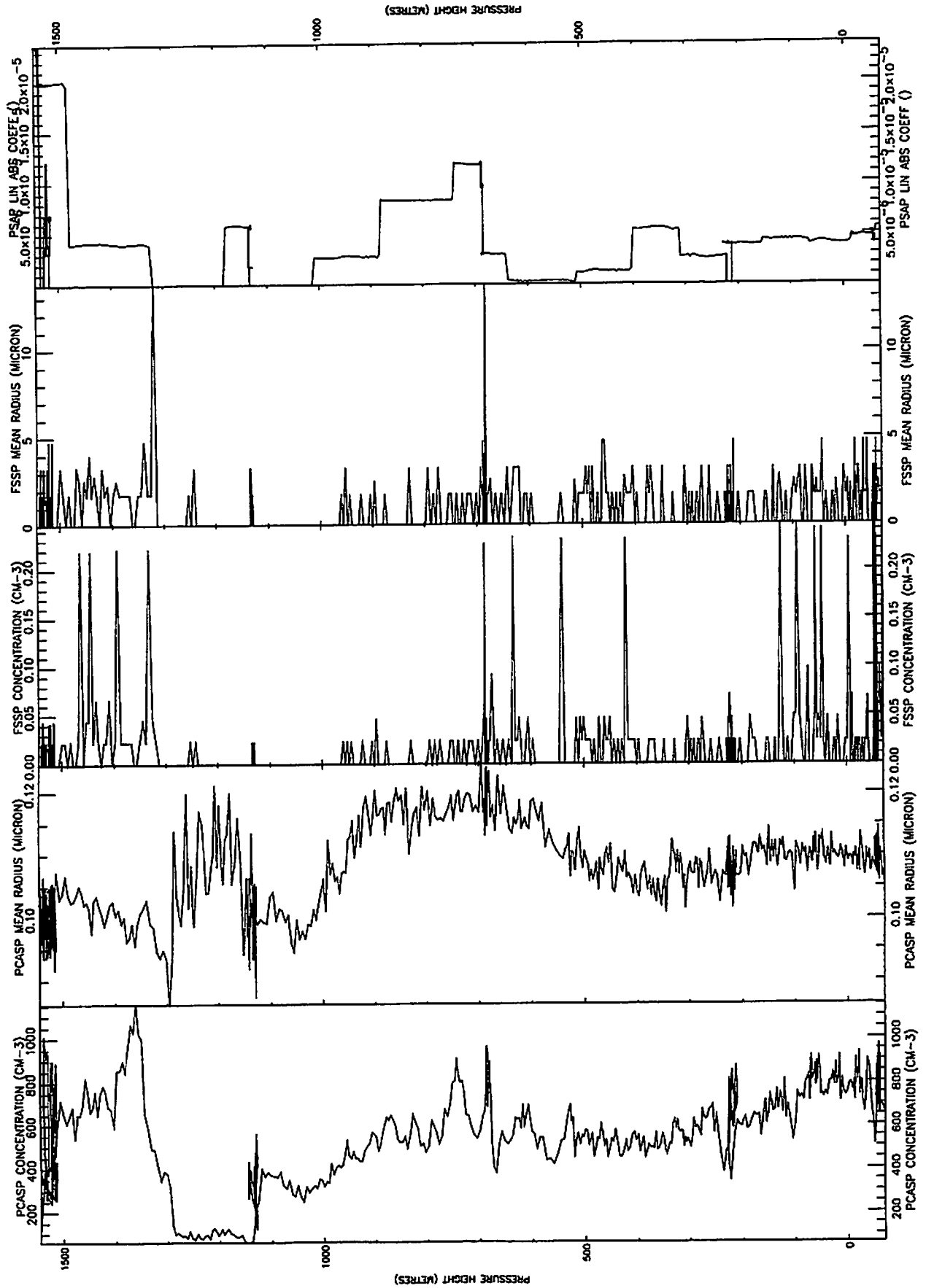
Mean 247.146



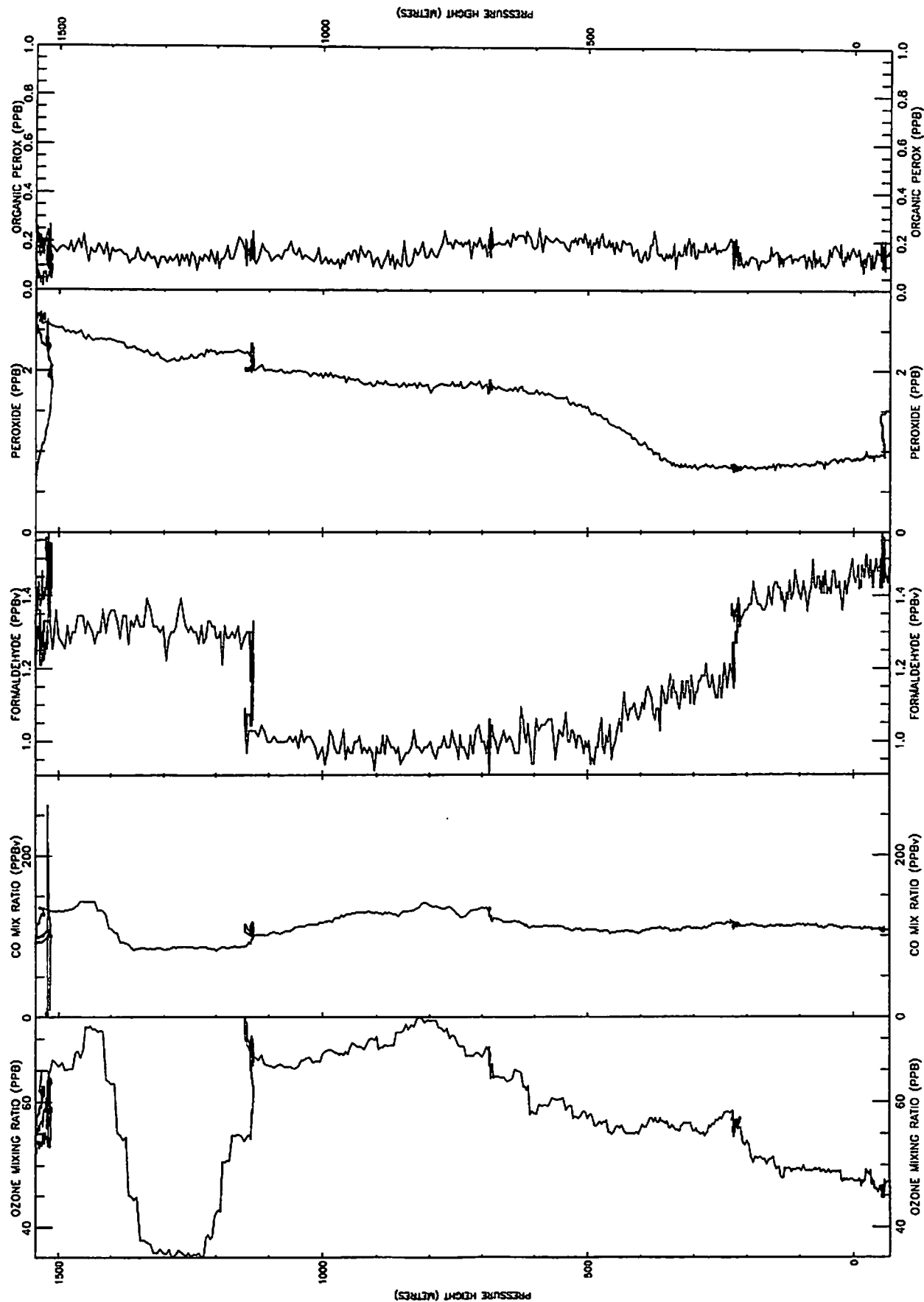
A571 18--AUG-97 P15 50'-5300' From 161121-162710 Plotted 11-Dec-1997 10:21



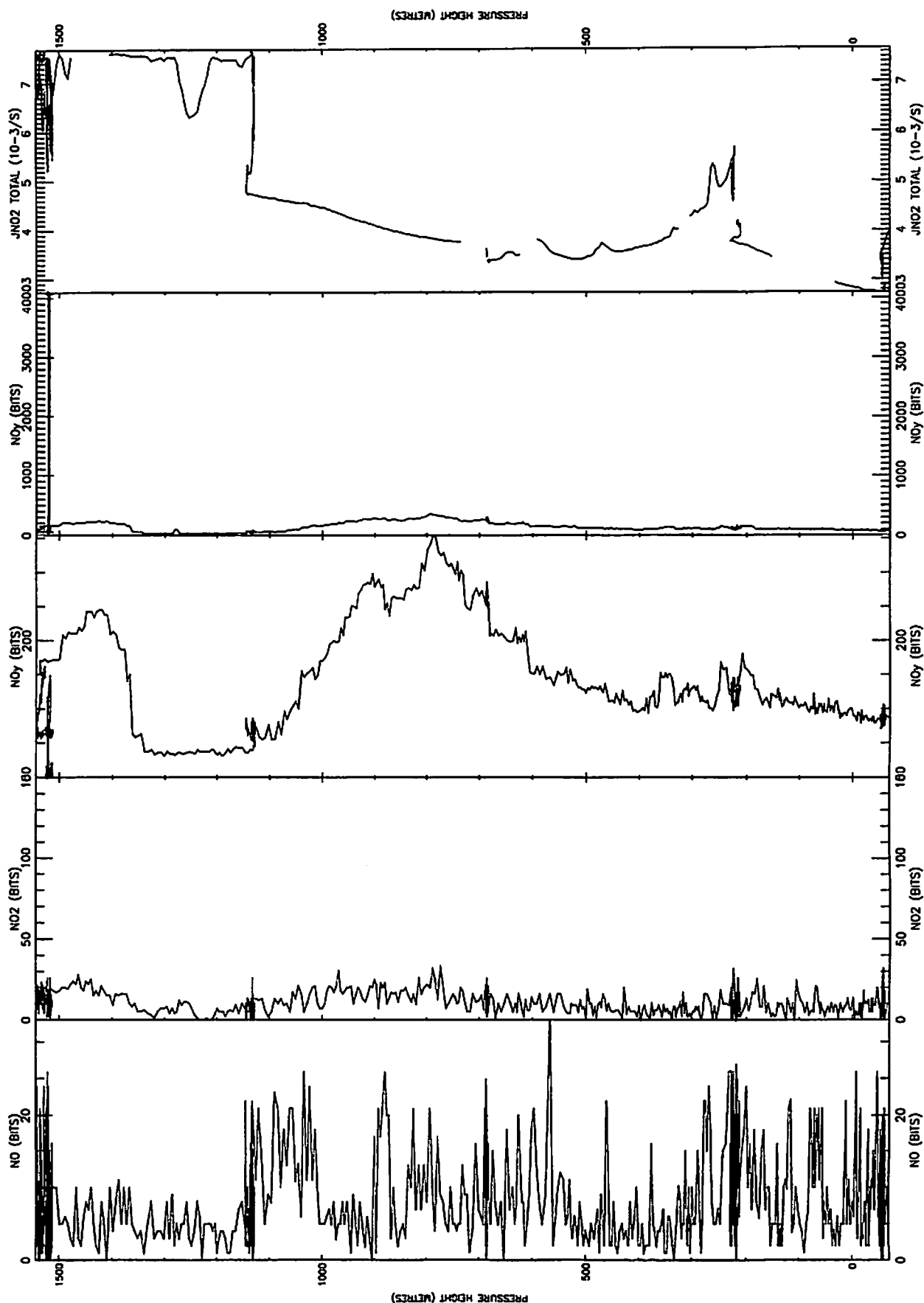
A571 18-AUG-97 P15 50'-5300' From 161121-162710 Plotted 12-Dec-1997 15:18



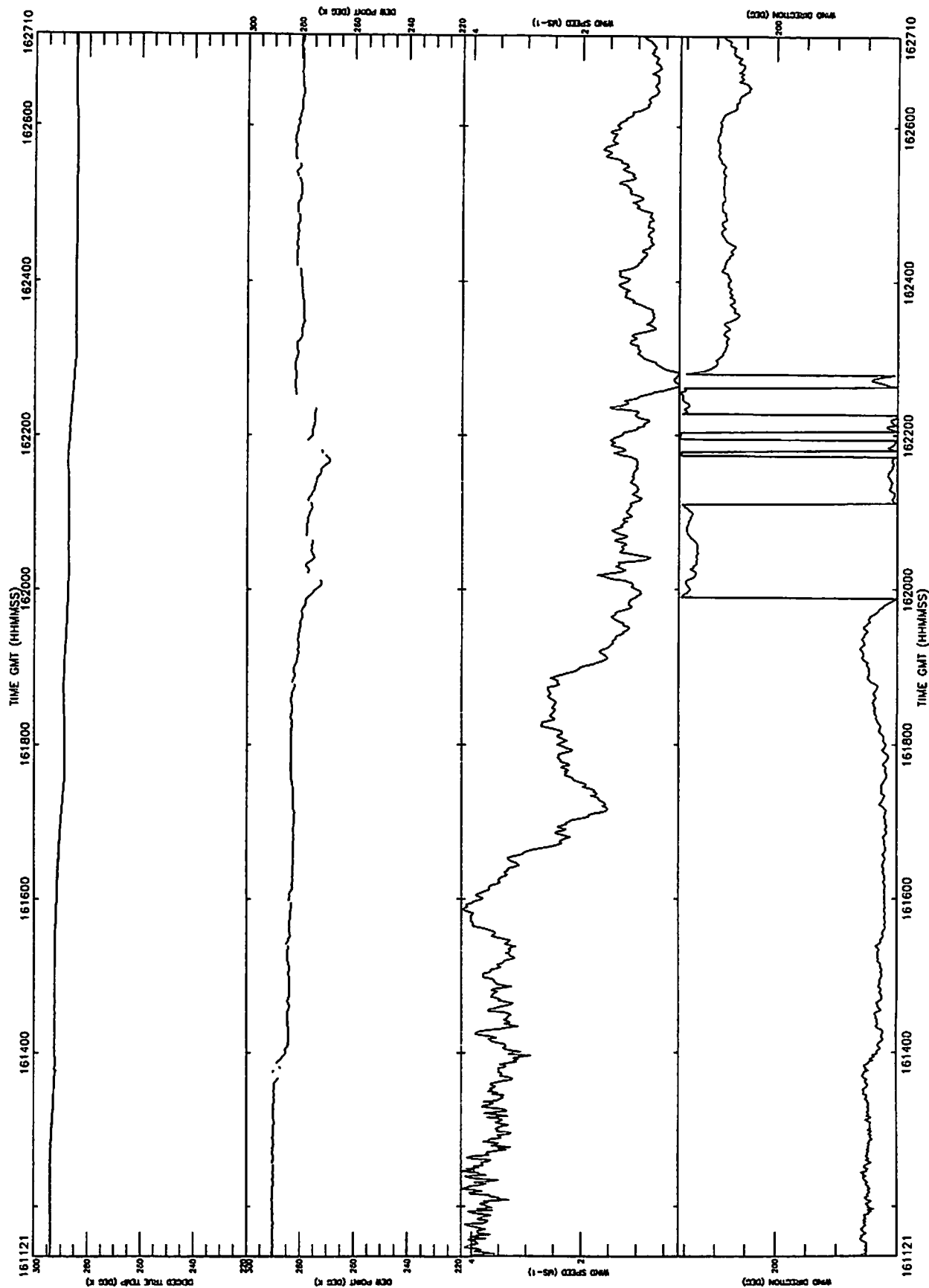
A571 18-AUG-97 P15 50'-5300' From 161121-162710 Plotted 11-Dec-1997 10:21



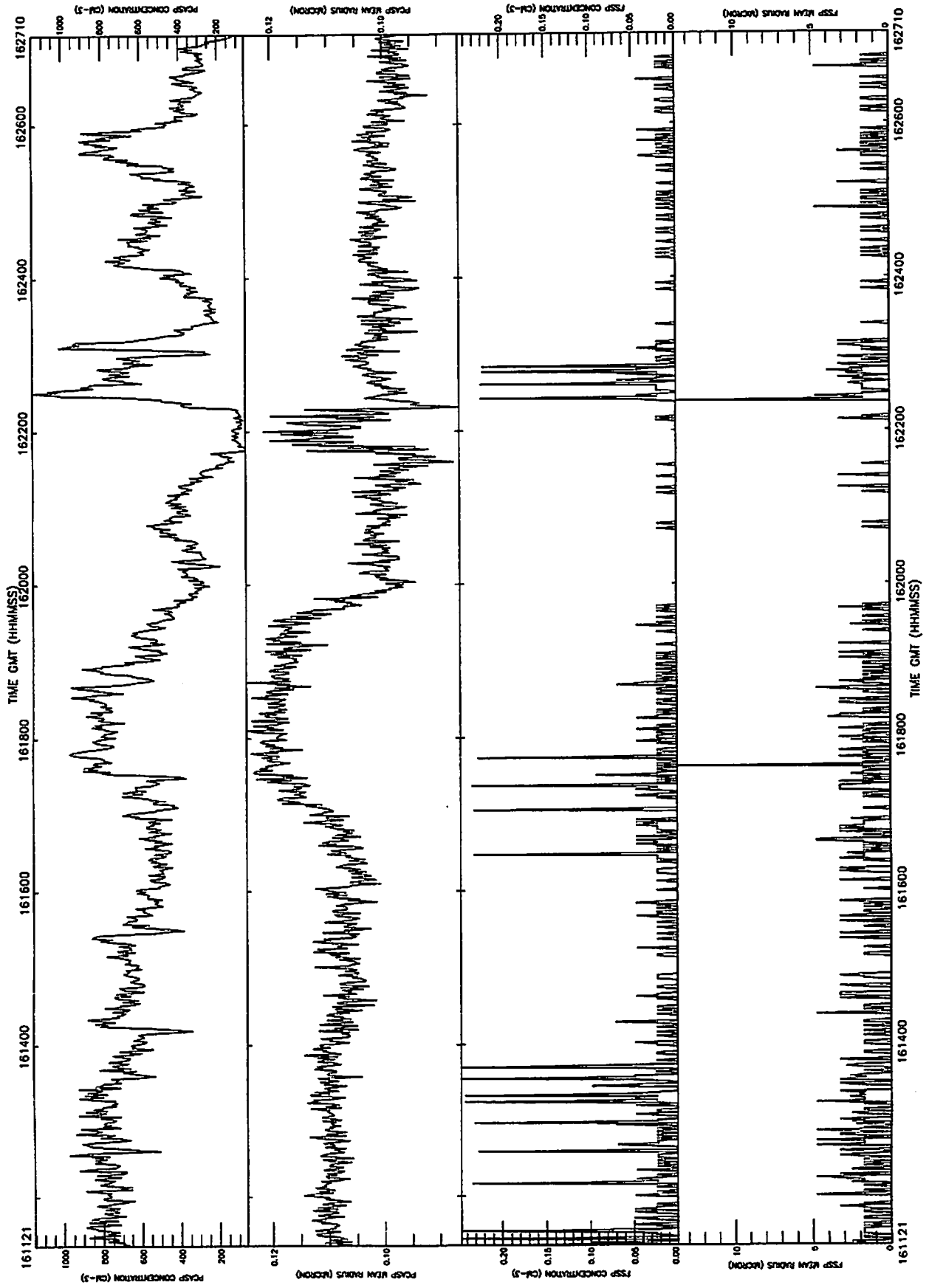
A571 18-AUG-97 P15 50'-5300' From 161121-162710 Plotted 11-Dec-1997 15:33



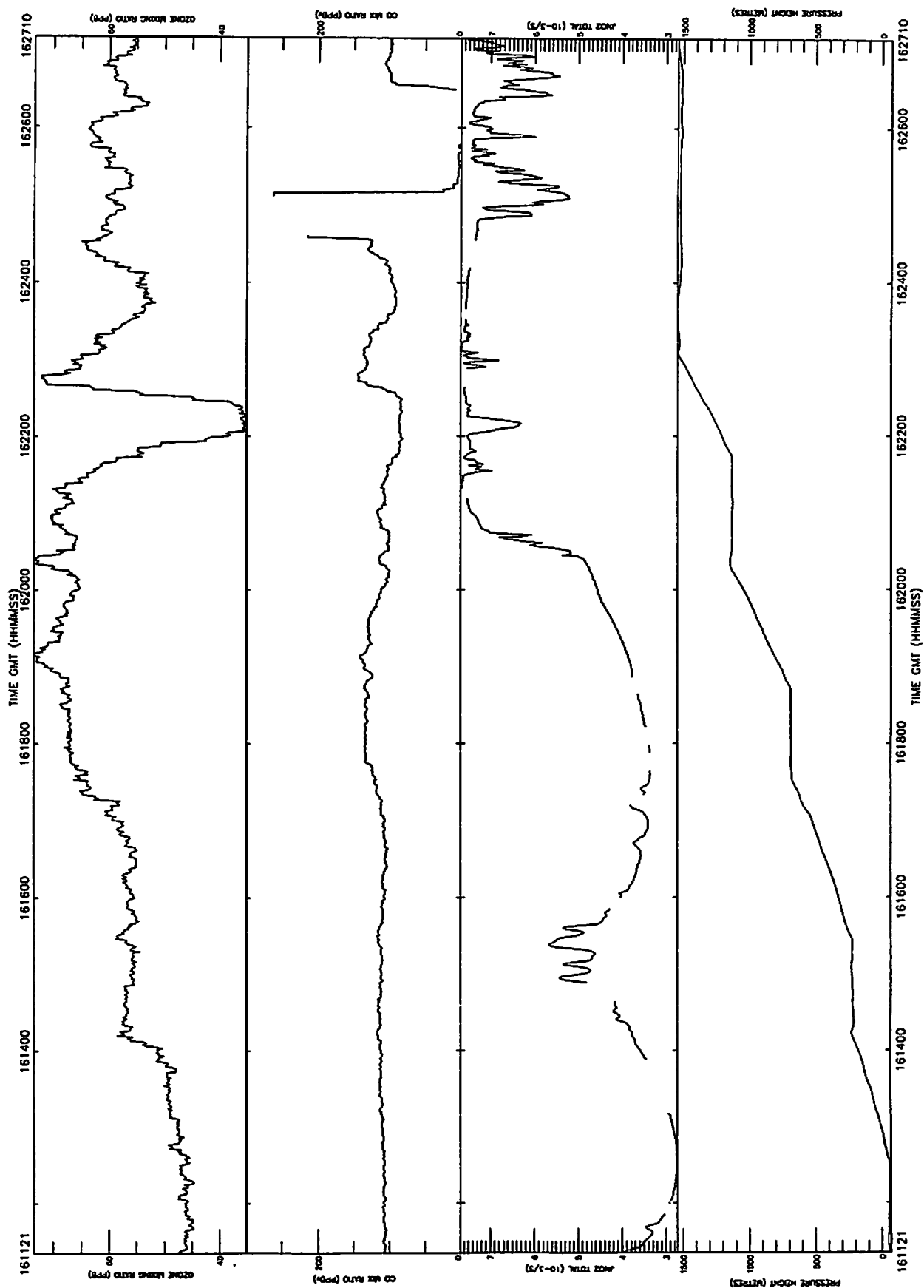
A571 18-AUG-97 P15 50'-5300' From 161121-162710 Plotted 11-Dec-1997 10:22



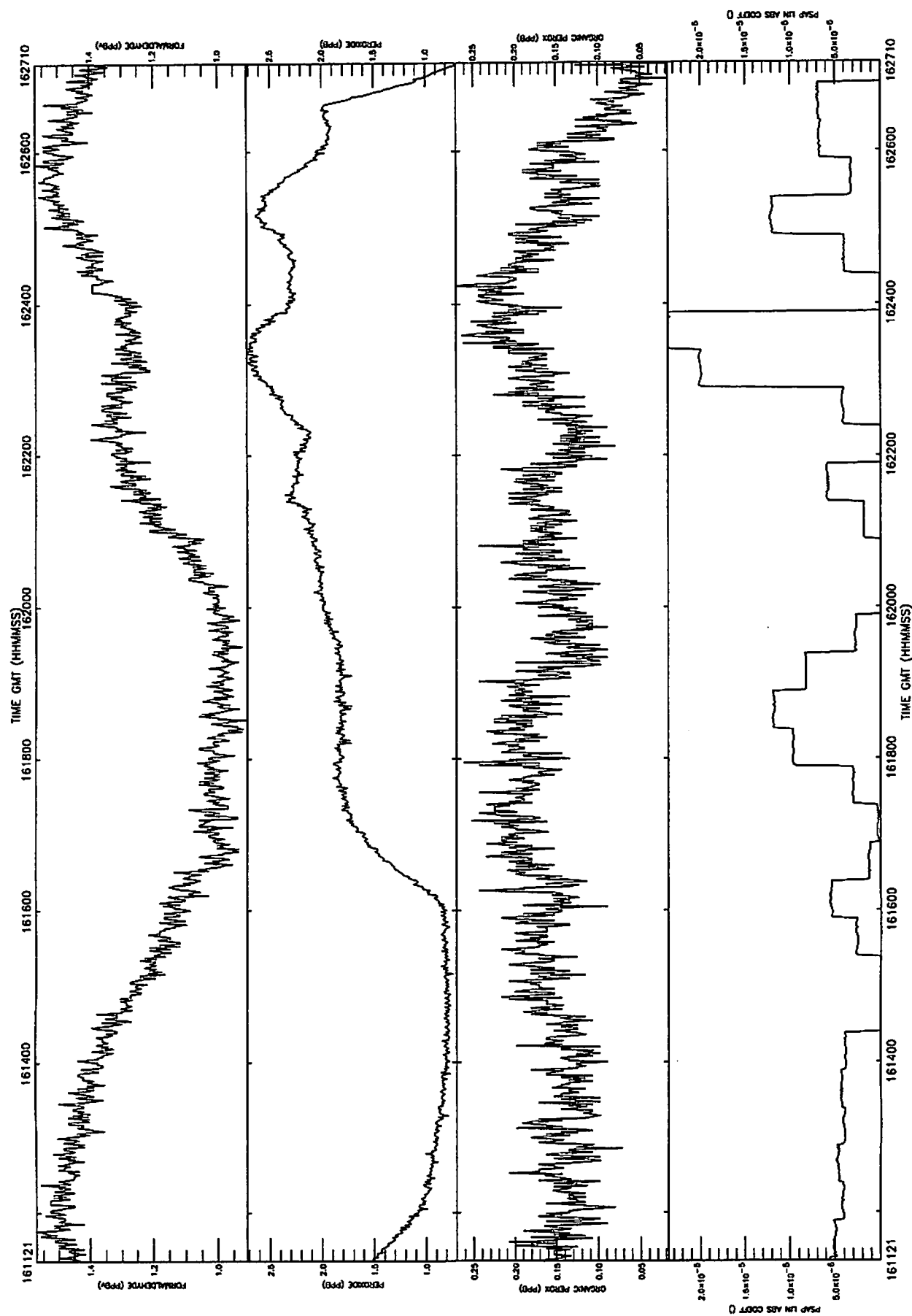
A571 18-AUG-97 P15 50'-5300' From 161121-162710 Plotted 12-Dec-1997 15:18



A571 18-AUG-97 P15 50'-5300' From 161121-162710 Plotted 11-Dec-1997 10:22

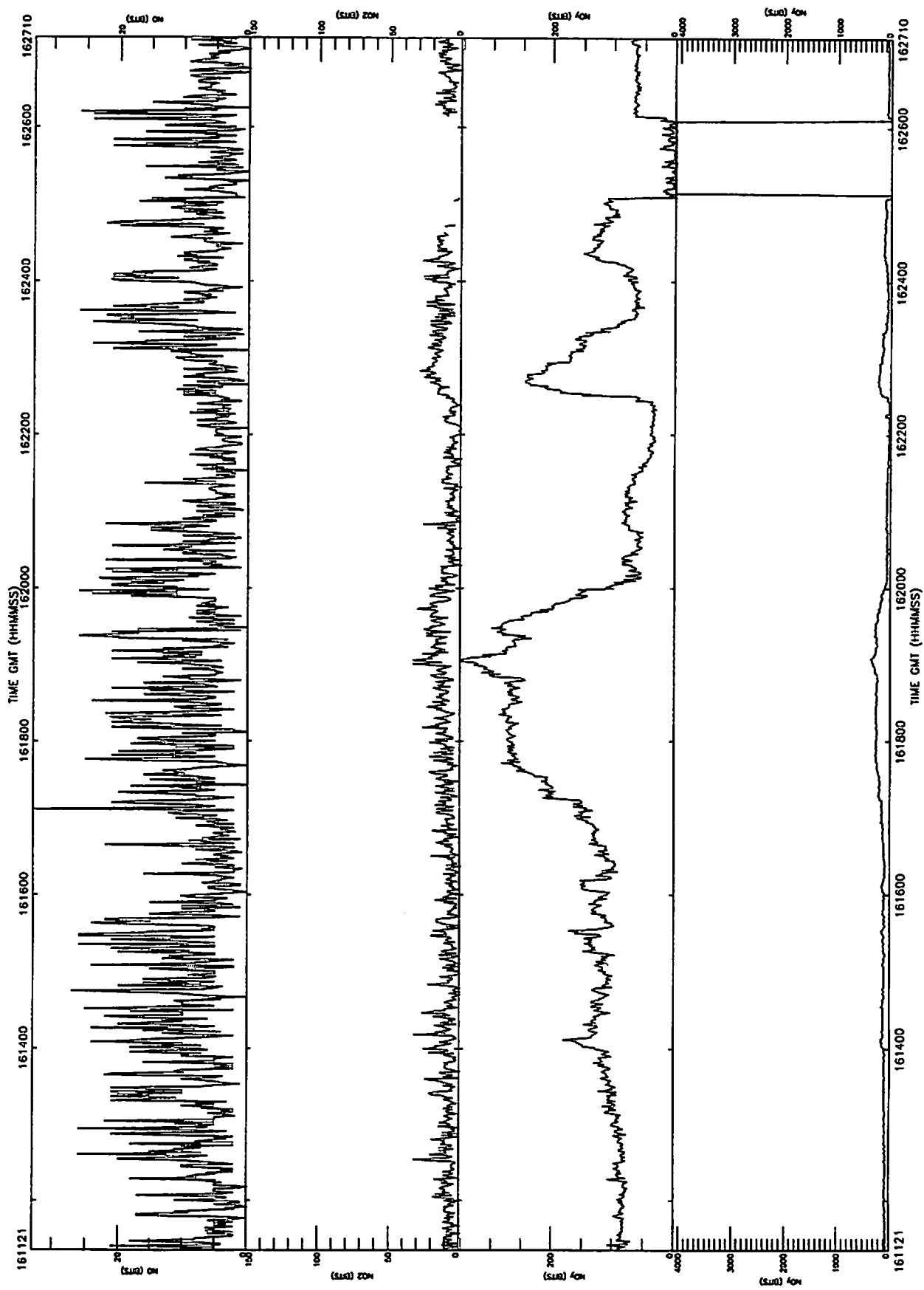


A571 18-AUG-97 P15 50'-5300' From 161121-162710 Plotted 11-Dec-1997 10:22





A571 18-AUG-97 P15 50'-5300' From 161121-162710 Plotted 11-Dec-1997 15:33



A571 18-AUG-97 P15 50'-5300' From 161121-162710 Plotted 12-Dec-1997 15:18

STATIC PRESSURE (MB)

No of obs 950  
Mean 919.199  
Standard dev 64.2354  
Max value 1021.45  
Min value 841.032

DEICED TRUE TEMP (DEG K)

No of obs 950  
Mean 288.598  
Standard dev 3.32771  
Max value 293.964  
Min value 284.121

DEW POINT (DEG K)

No of obs 950  
Mean 282.014  
Standard dev 4.58615  
Max value 290.502  
Min value 268.899

OZONE MIXING RATIO (PPB)

No of obs 950  
Mean 58.1474  
Standard dev 8.27402  
Max value 73.4518  
Min value 35.2021

PCASP CONCENTRATION (CM-3)

No of obs 950  
Mean 559.737  
Standard dev 212.803  
Max value 1154.65  
Min value 60.1196

FSSP CONCENTRATION (CM-3)

No of obs 950  
Mean 1.286314e-02  
Standard dev 3.411238e-02  
Max value 0.246101  
Min value 0.000000

PRESSURE HEIGHT (METRES)

No of obs 950  
Mean 830.351  
Standard dev 576.739  
Max value 1543.70  
Min value -68.0007

CORRECTED LATITUDE (DEGREES)

No of obs 950  
Mean 56.3078  
Standard dev 9.854469e-02  
Max value 56.4753  
Min value 56.1278

CORRECTED LONGITUDE (DEGREES)

No of obs 950  
Mean 4.45419  
Standard dev 0.404708  
Max value 5.14862  
Min value 3.75288

NORTHWARD WIND COMPT (M S-1)

No of obs 950  
Mean -1.52834  
Standard dev 1.12054  
Max value 0.299034  
Min value -3.91546

EASTWARD WIND COMPT (M S-1)

No of obs 950  
Mean -0.636067  
Standard dev 1.33267  
Max value 1.45302  
Min value -3.45467

VERTICAL WIND COMPT (M S-1)

No of obs 950  
Mean -0.266670  
Standard dev 0.358512  
Max value 0.826767  
Min value -0.958702

WIND SPEED (MS-1)

No of obs 950  
Mean 2.08594  
Standard dev 1.19129  
Max value 4.19513  
Min value 0.239424

WIND DIRECTION (DEG)

Mean 22.5962

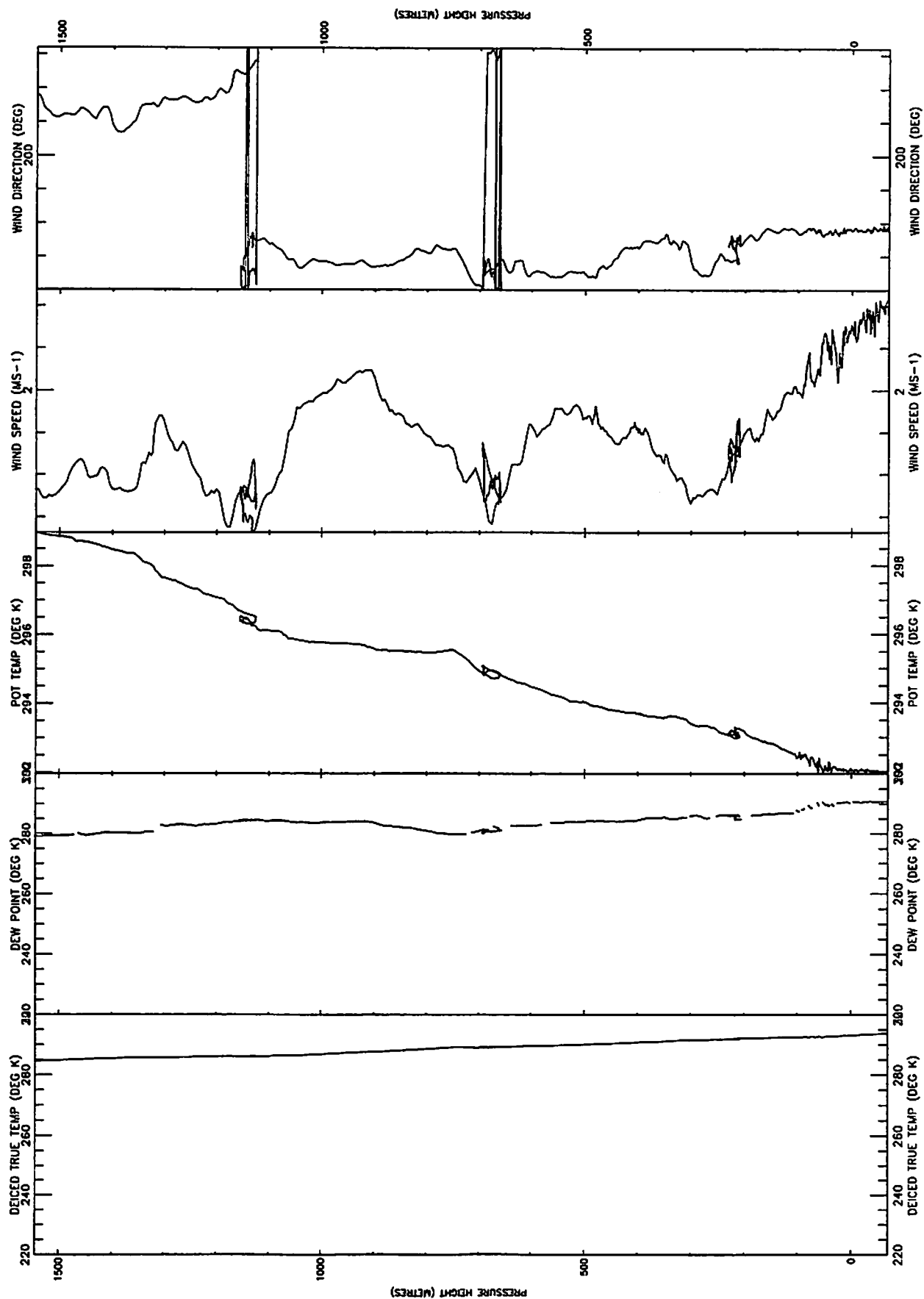
TRUE AIR SPEED (M S-1)

No of obs 950  
Mean 98.4734  
Standard dev 4.06153  
Max value 108.477  
Min value 88.7776

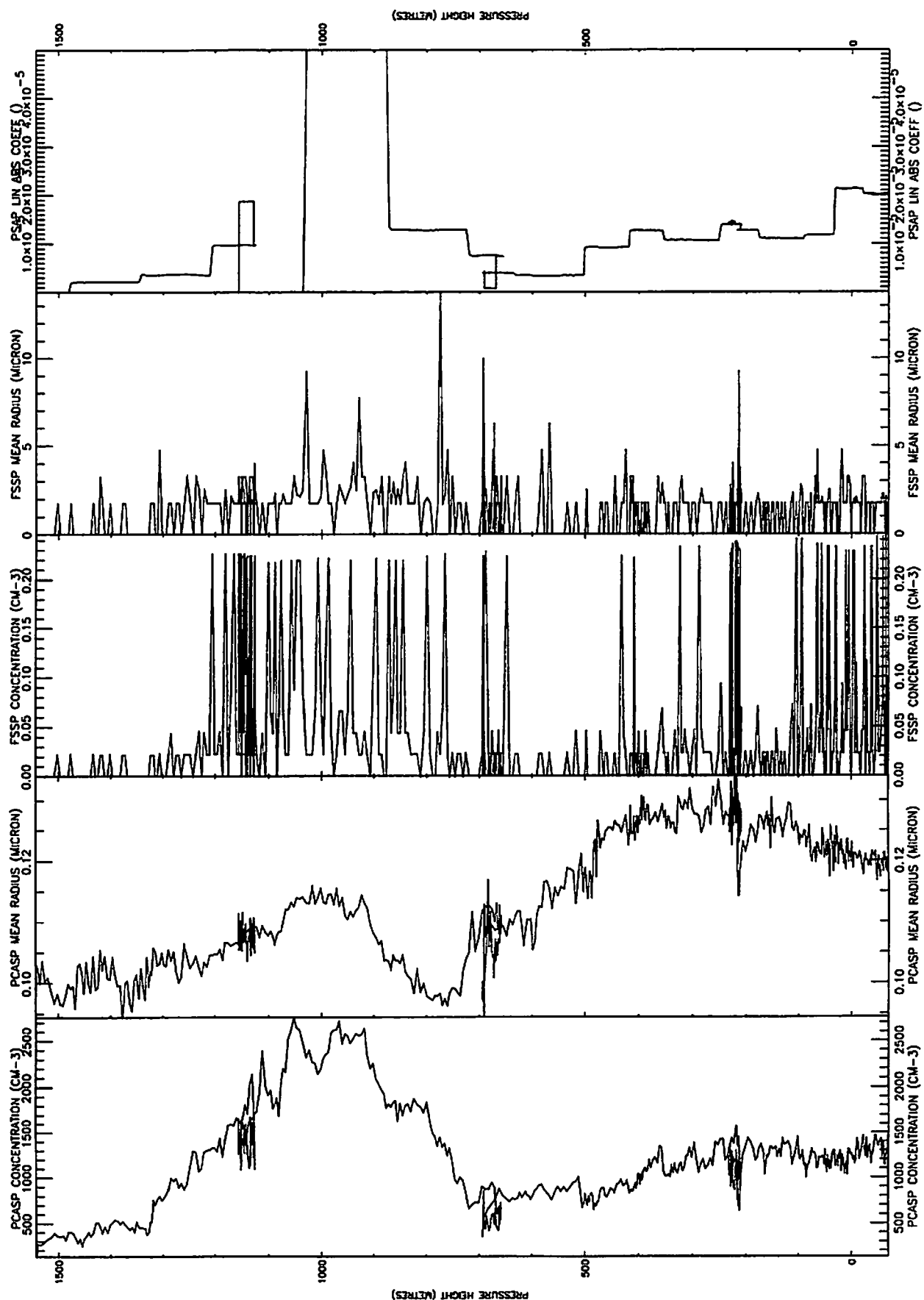
HEADING (DEG)

Mean 245.860

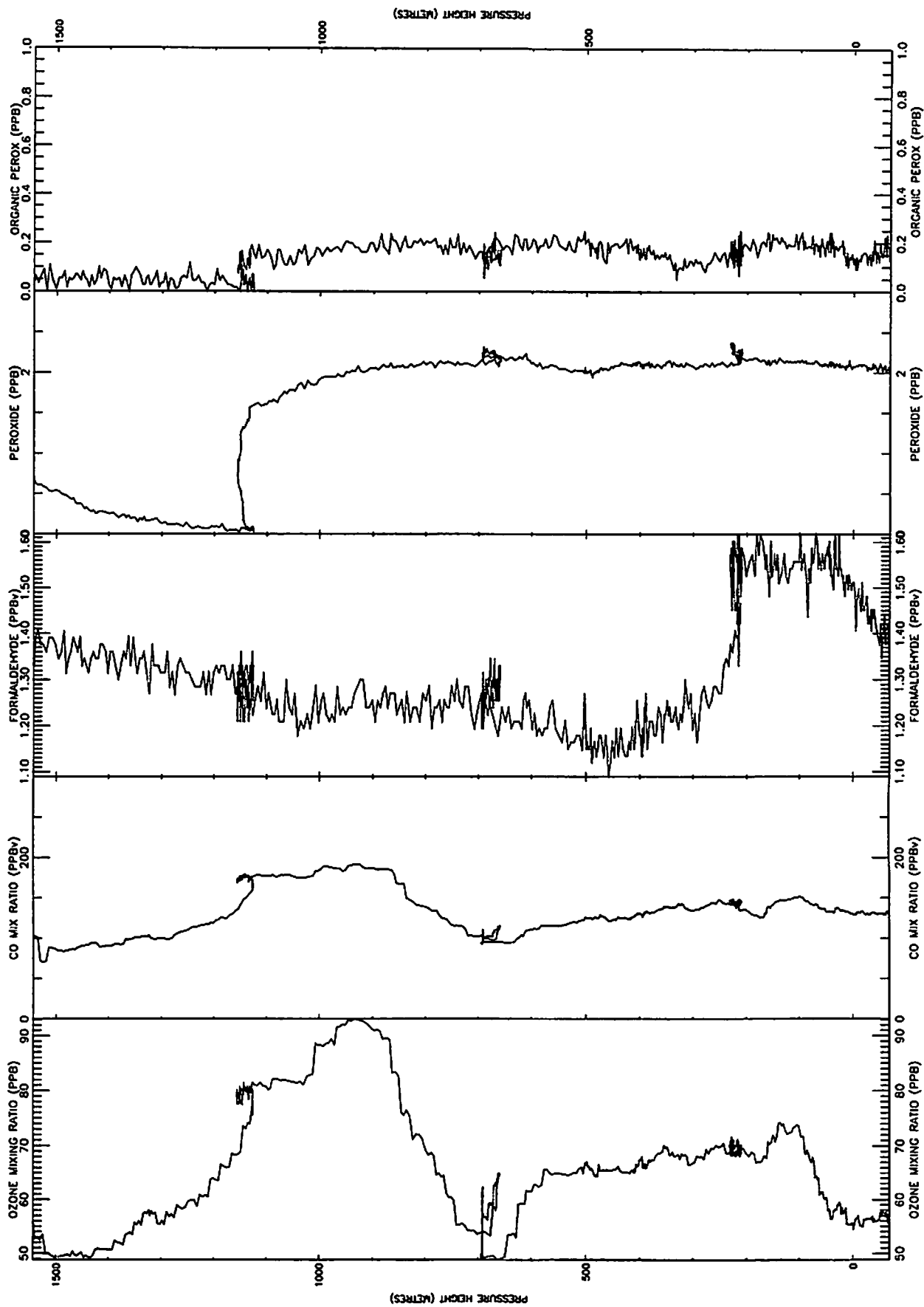
A571 18-AUG-97 P16 5300'-50' From 162710-163853 Plotted 11-Dec-1997 10:26



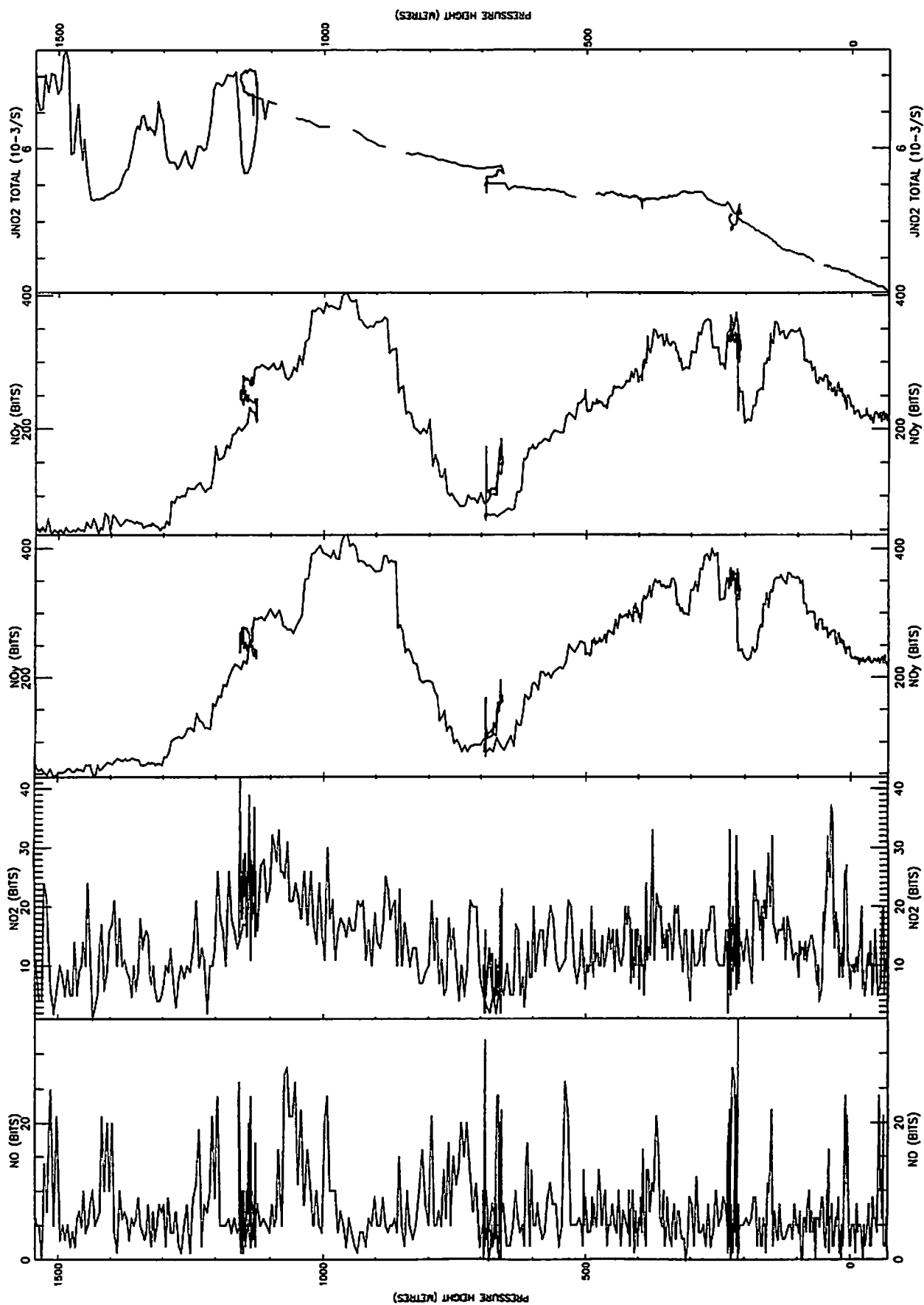
A571 18-AUG-97 P16 5300'-50' From 162710-163853 Plotted 12-Dec-1997 15:21



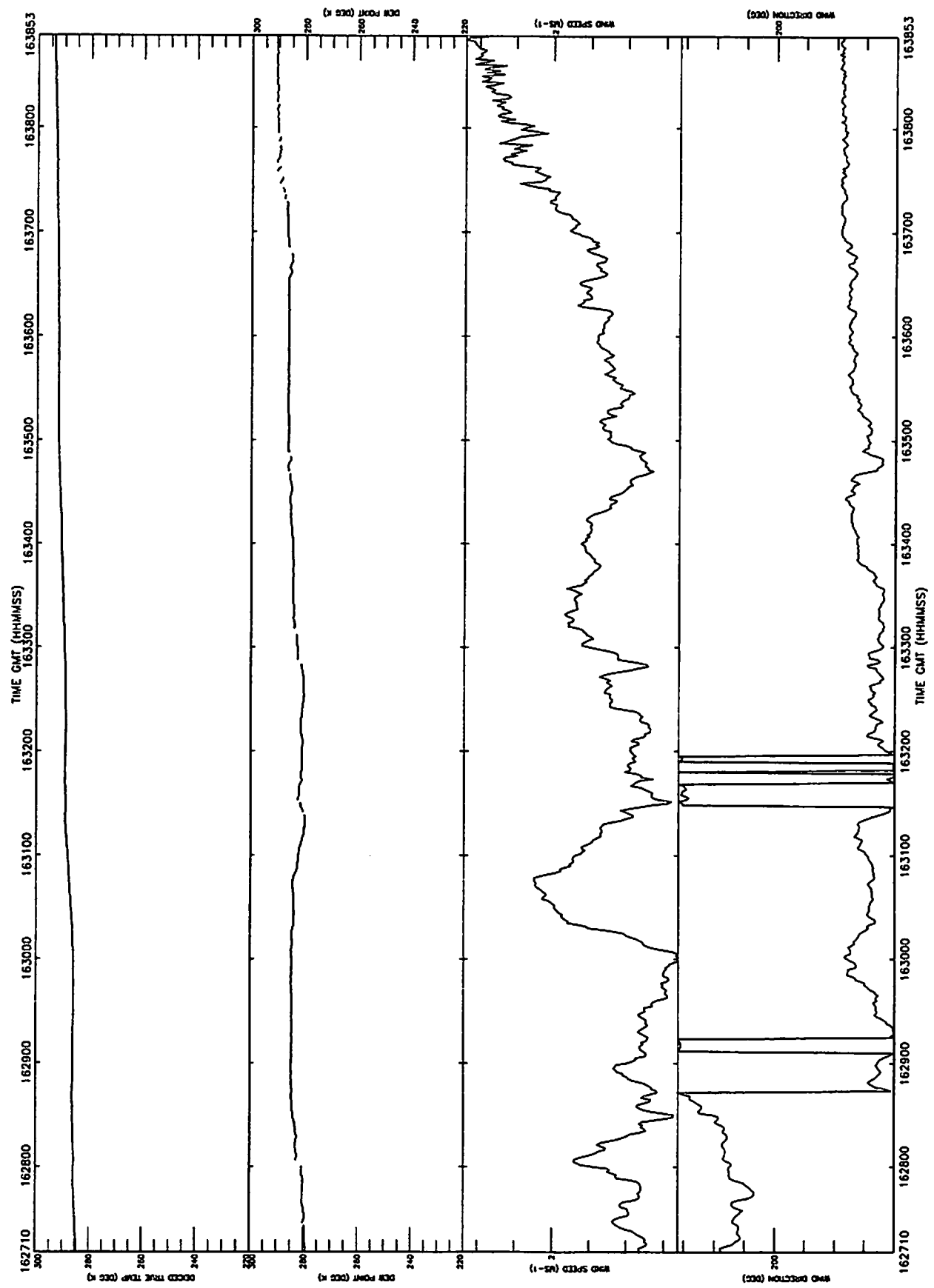
A571 18-AUG-97 P16 5300'-50' From 162710-163853 Plotted 11-Dec-1997 10:26



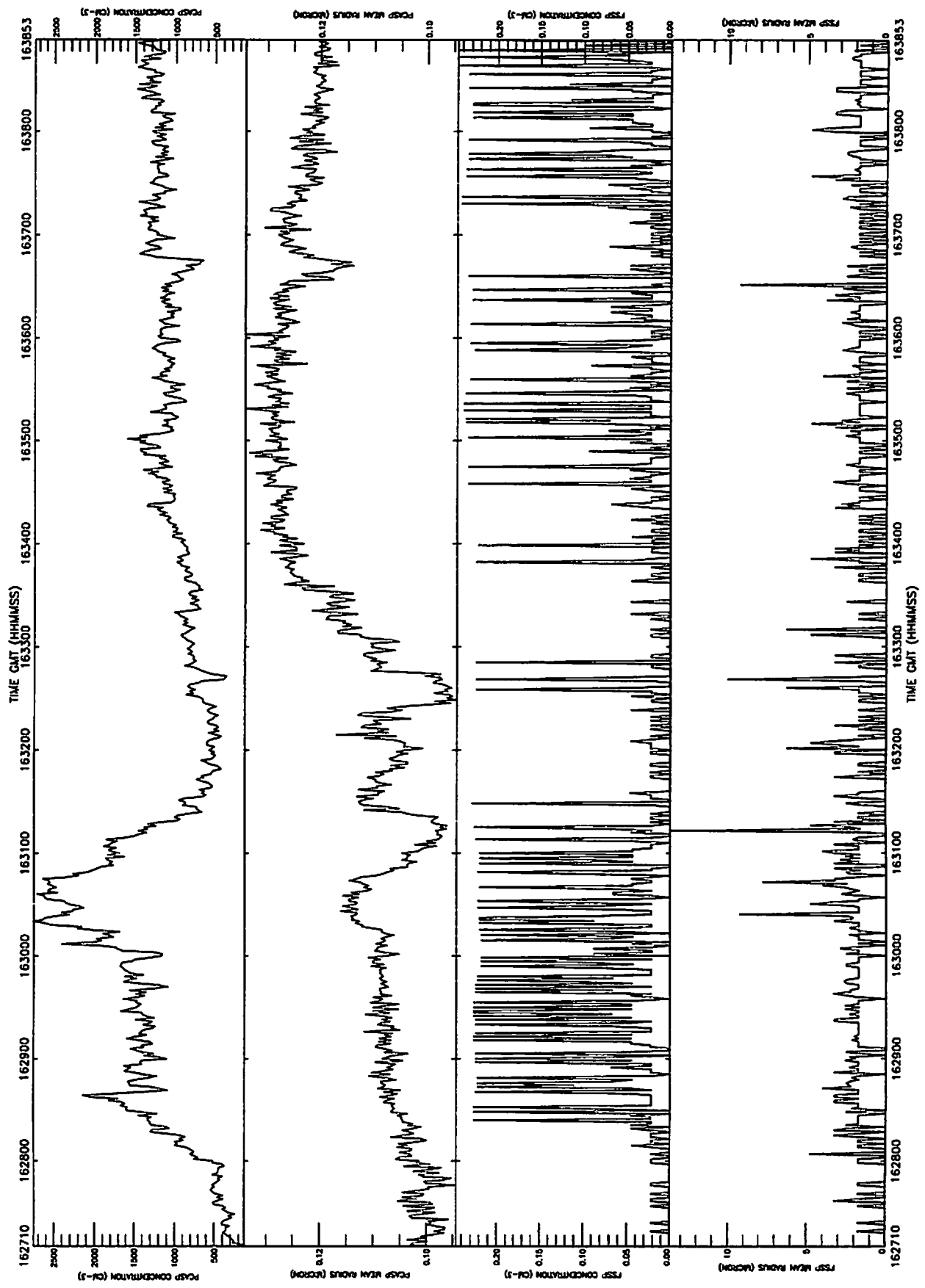
A571 18-AUG-97 P16 5300'-50' From 162710-163853 Plotted 11-Dec-1997 10:26



A571 18-AUG-97 P16 5300'-50' From 162710-163853 Plotted 11-Dec-1997 10:26

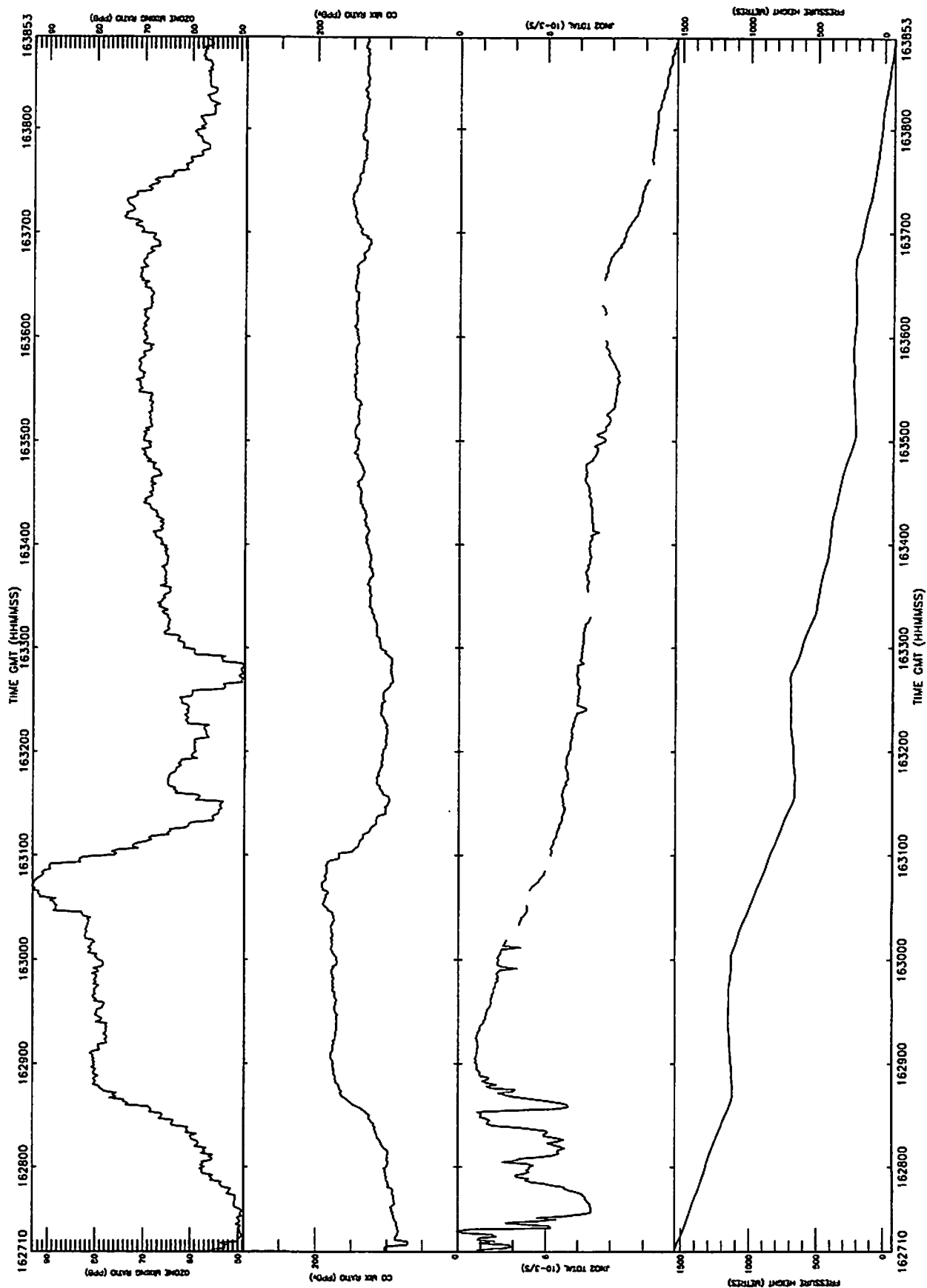


A571 18-AUG-97 P16 5300'-50' From 162710-163853 Plotted 12-Dec-1997 15:21

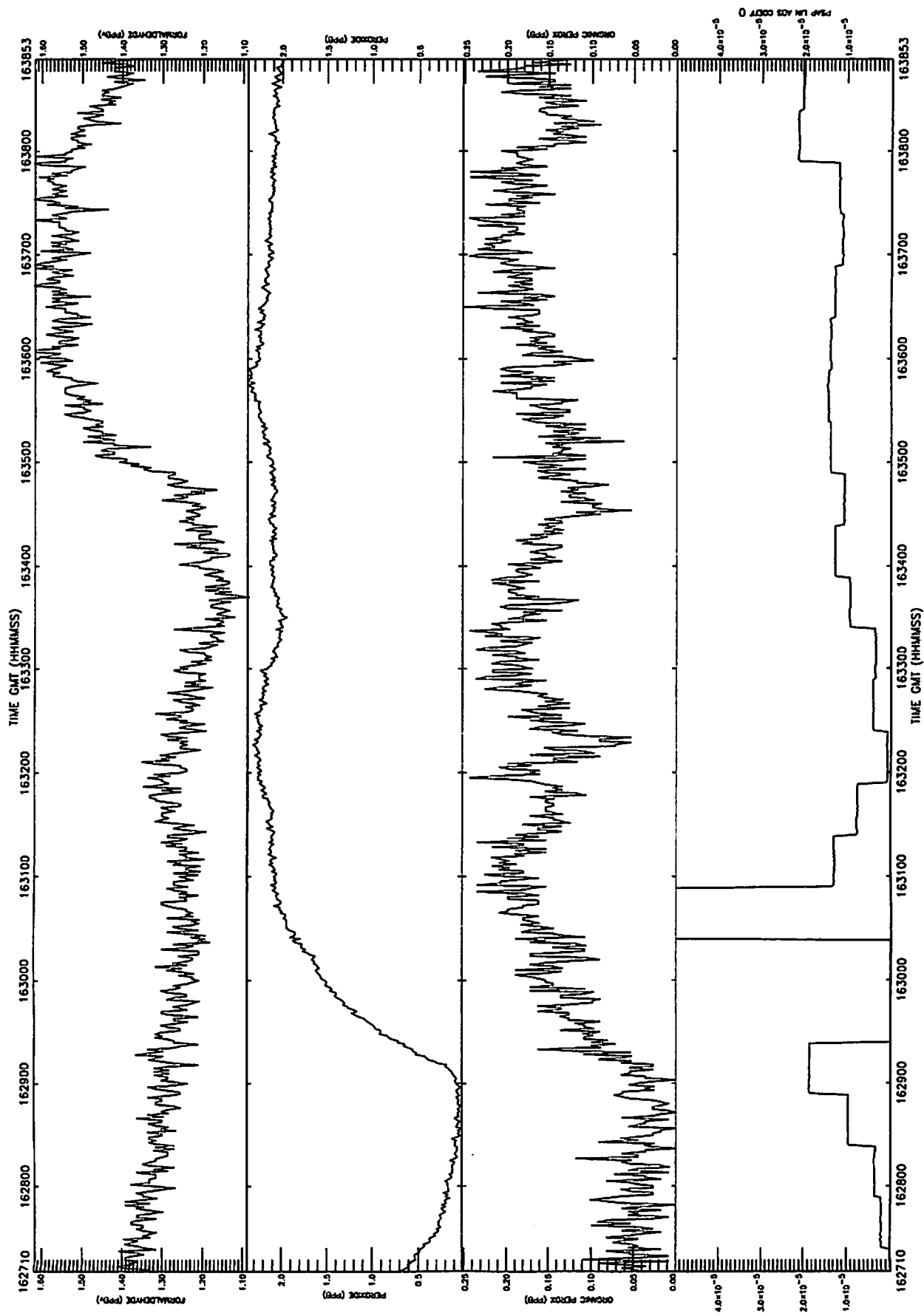




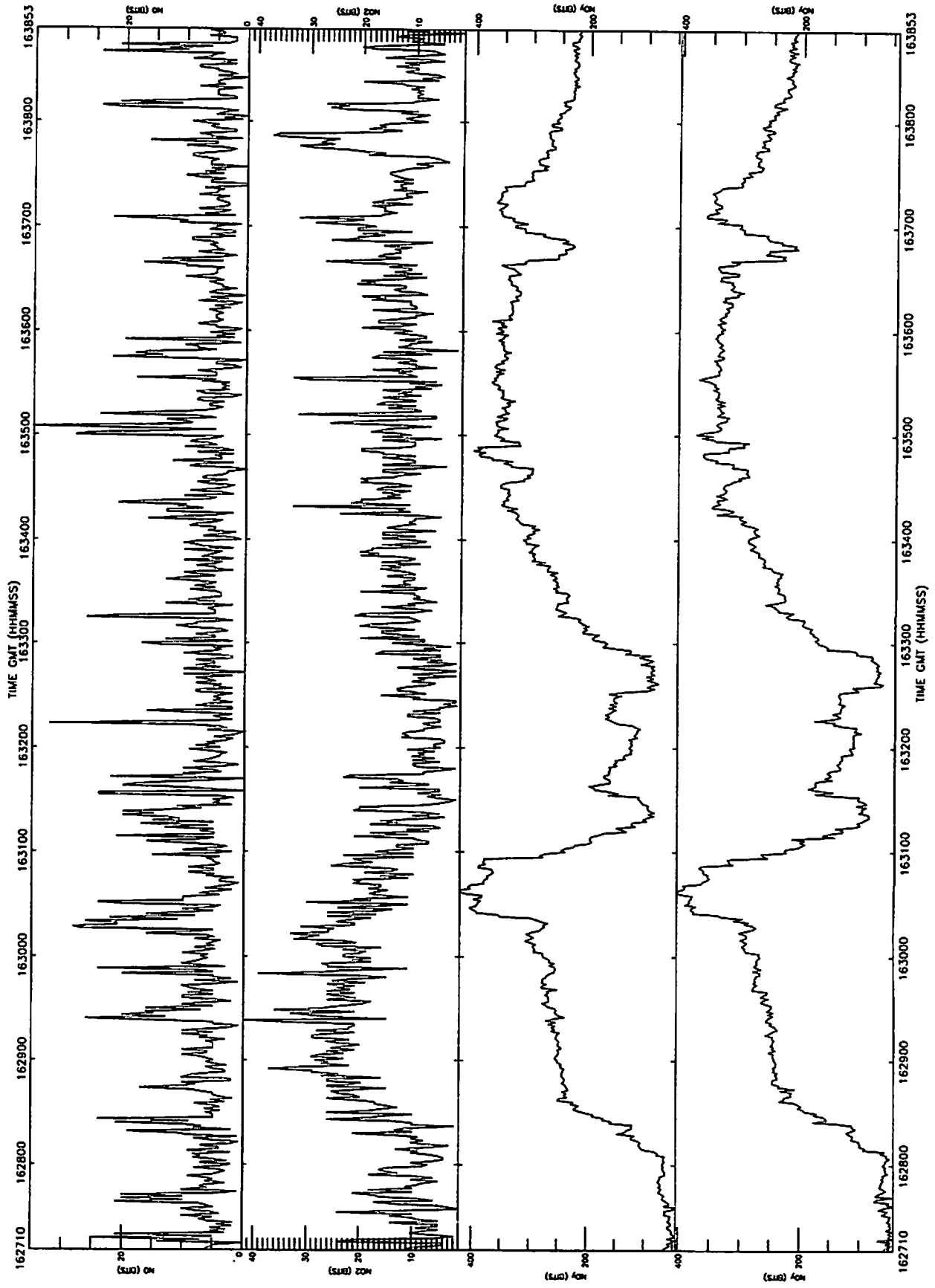
A571 18-AUG-97 P16 5300'-50' From 162710-163853 Plotted 11-Dec-1997 10:26



A571 18-AUG-97 P16 5300'-50' From 162710-163853 Plotted 11-Dec-1997 10:26



A571 18-AUG-97 P16 5300'-50' From 162710-163853 Plotted 11-Dec-1997 10:27



A571 18-AUG-97 P16 5300'-50' From 162710-163853 *Plotted 12-Dec-1997 15:21*

STATIC PRESSURE (MB)

No of obs 704  
Mean 942.368  
Standard dev 51.2701  
Max value 1021.62  
Min value 841.041

DEICED TRUE TEMP (DEG K)

No of obs 704  
Mean 289.559  
Standard dev 2.72136  
Max value 293.829  
Min value 284.549

DEW POINT (DEG K)

No of obs 704  
Mean 284.568  
Standard dev 3.00191  
Max value 290.928  
Min value 279.202

OZONE MIXING RATIO (PPB)

No of obs 704  
Mean 66.8358  
Standard dev 9.93216  
Max value 93.1399  
Min value 48.8321

PCASP CONCENTRATION (CM-3)

No of obs 704  
Mean 1137.43  
Standard dev 474.351  
Max value 2757.67  
Min value 131.995

FSSP CONCENTRATION (CM-3)

No of obs 704  
Mean 4.503517e-02  
Standard dev 6.972039e-02  
Max value 0.246101  
Min value 0.000000

PRESSURE HEIGHT (METRES)

No of obs 704  
Mean 617.534  
Standard dev 455.640  
Max value 1543.62  
Min value -69.4122

CORRECTED LATITUDE (DEGREES)

No of obs 704  
Mean 55.9763  
Standard dev 9.169526e-02  
Max value 56.1278  
Min value 55.8062

CORRECTED LONGITUDE (DEGREES)

No of obs 704  
Mean 3.26383  
Standard dev 0.275041  
Max value 3.75288  
Min value 2.81046

NORTHWARD WIND COMPT (M S-1)

No of obs 704  
Mean -0.551443  
Standard dev 0.490254  
Max value 0.489861  
Min value -1.86092

EASTWARD WIND COMPT (M S-1)

No of obs 704  
Mean -0.850417  
Standard dev 1.01562  
Max value 1.68878  
Min value -3.18888

VERTICAL WIND COMPT (M S-1)

No of obs 704  
Mean 0.613619  
Standard dev 0.283091  
Max value 1.26933  
Min value -5.655670e-02

WIND SPEED (MS-1)

No of obs 704  
Mean 1.37880  
Standard dev 0.629906  
Max value 3.18898  
Min value 0.314703

WIND DIRECTION (DEG)

Mean 57.0391

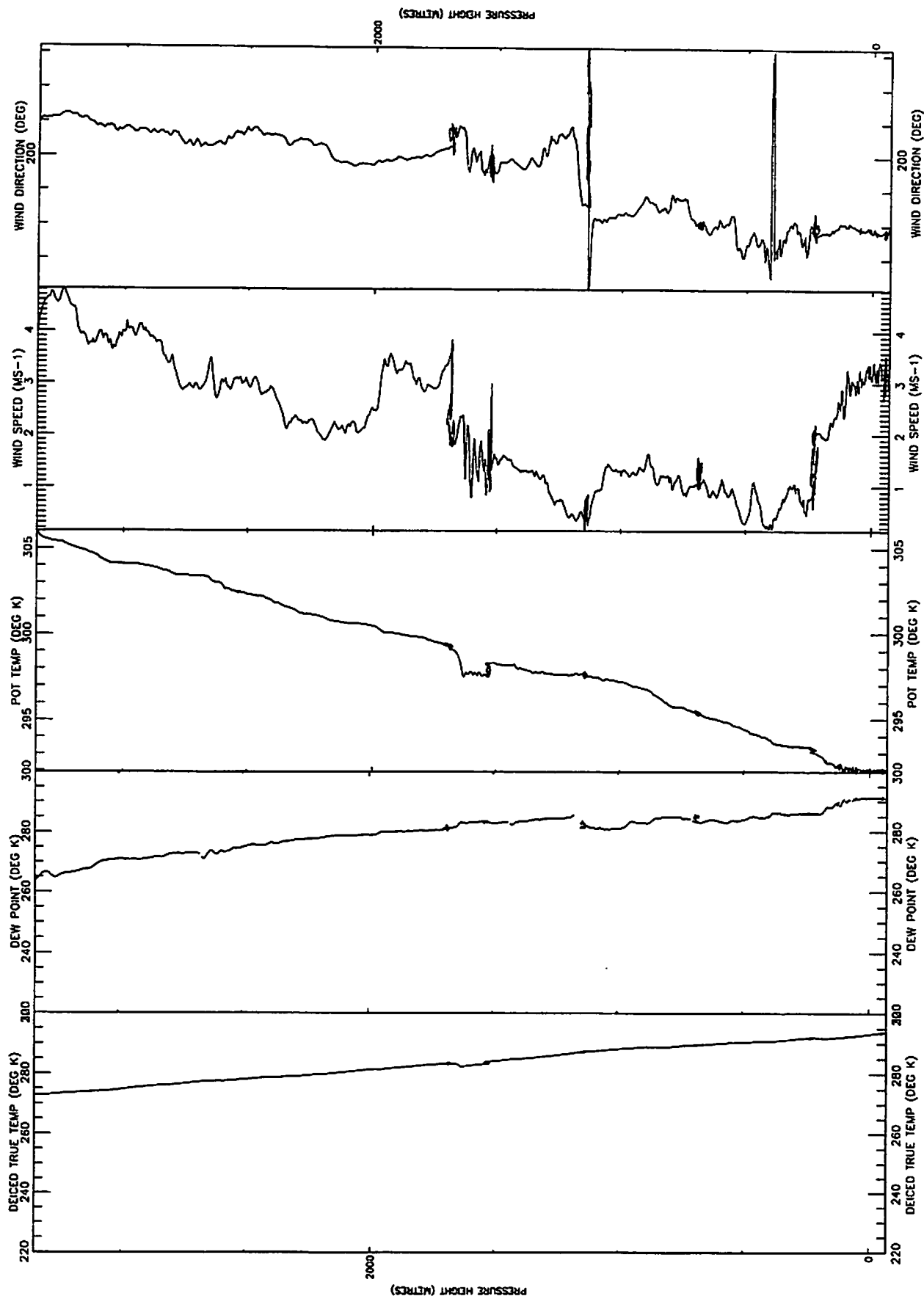
TRUE AIR SPEED (M S-1)

No of obs 704  
Mean 97.2720  
Standard dev 2.92527  
Max value 102.686  
Min value 89.5209

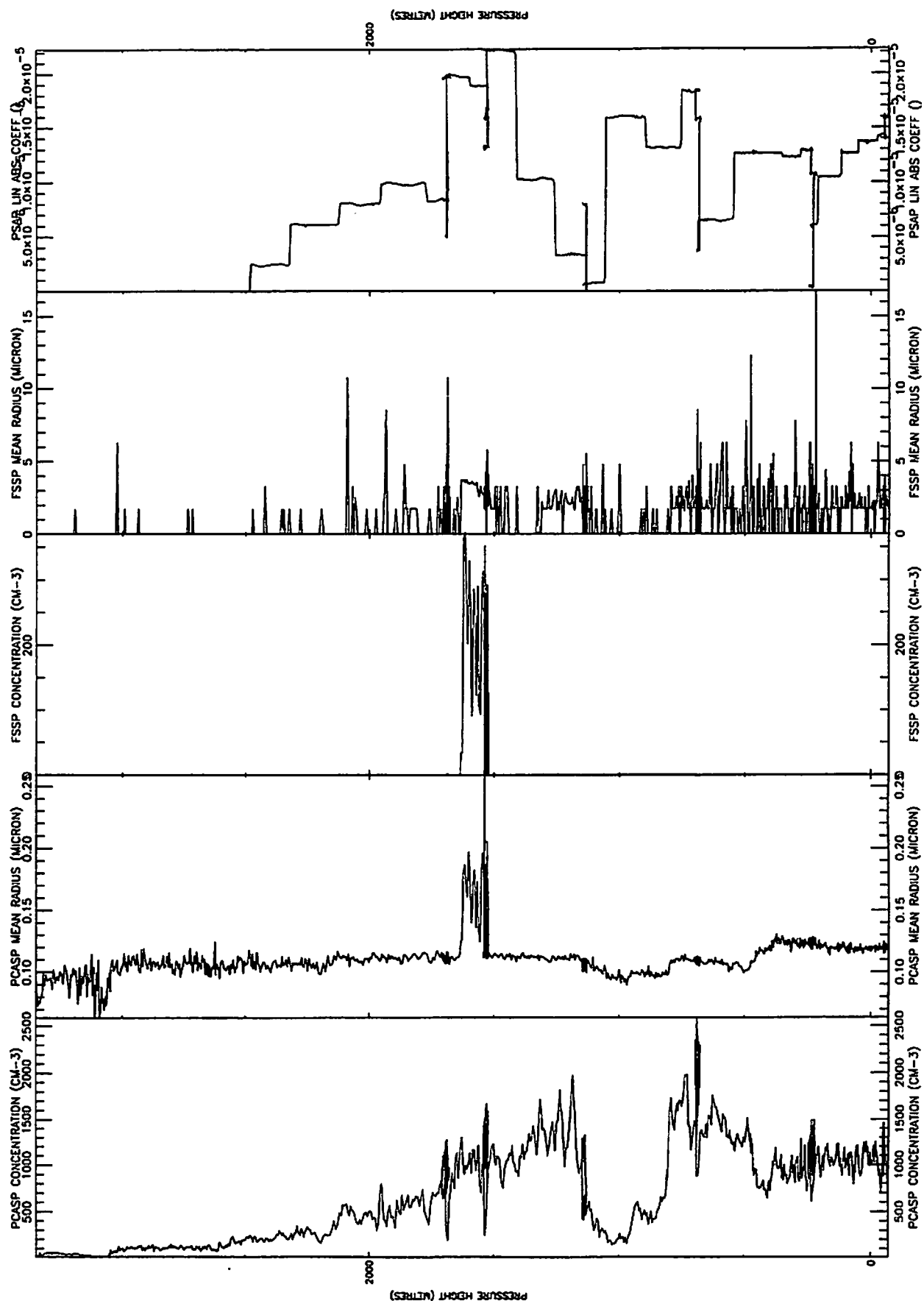
HEADING (DEG)

Mean 238.653

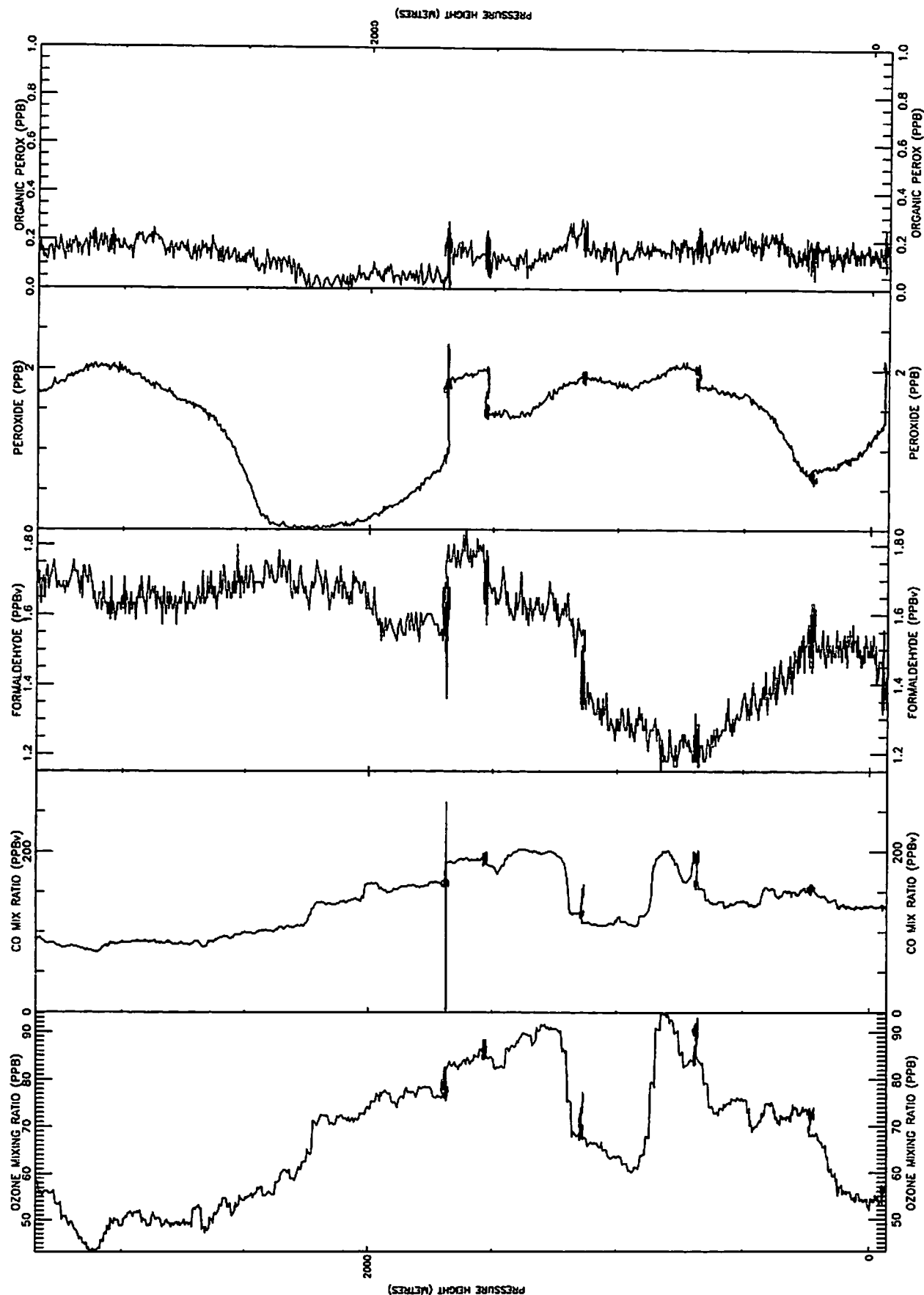
A571 18-AUG-97 P17 50'--FL110 From 163853--170335 Plotted 11-Dec-1997 10:34



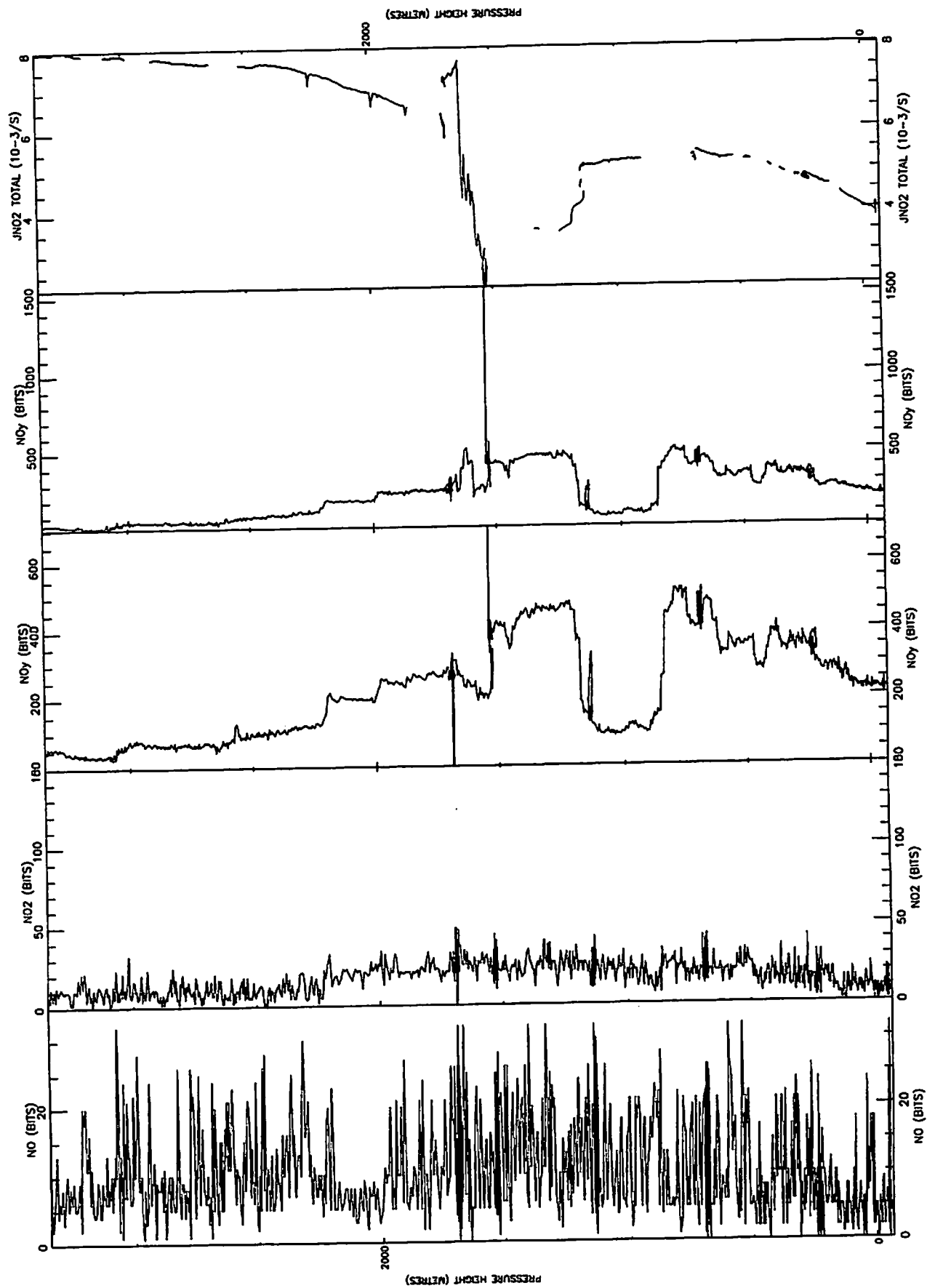
A571 18-AUG-97 P17 50'-FL110 From 163853-170335 Plotted 12-Dec-1997 15:25



A571 18-AUG-97 P17 50'-FL110 From 163853-170335 Plotted 11-Dec-1997 10:34

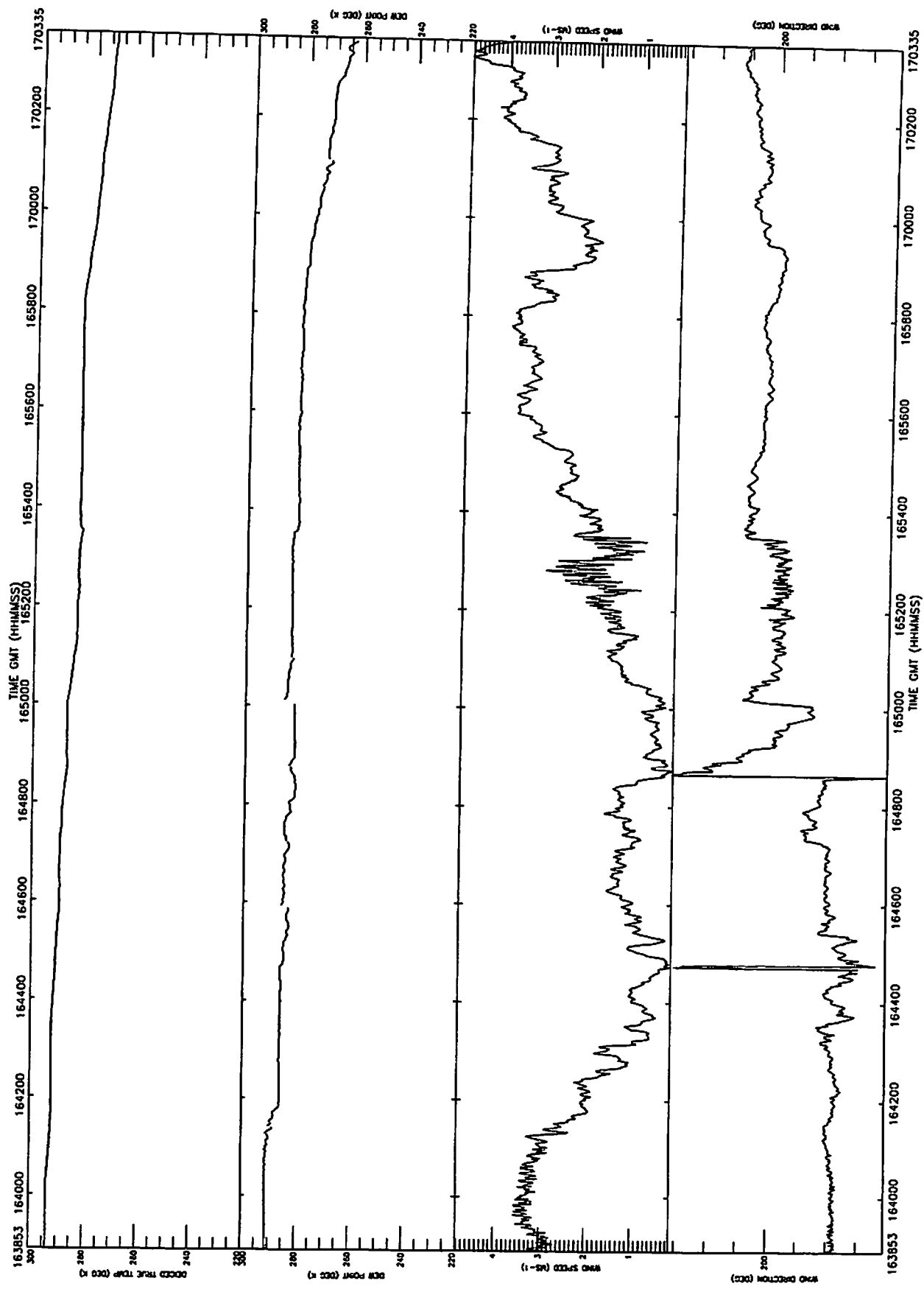


A571 18-AUG-97 P17 50'-FL110 From 163853-170335 Plotted 11-Dec-1997 15:40

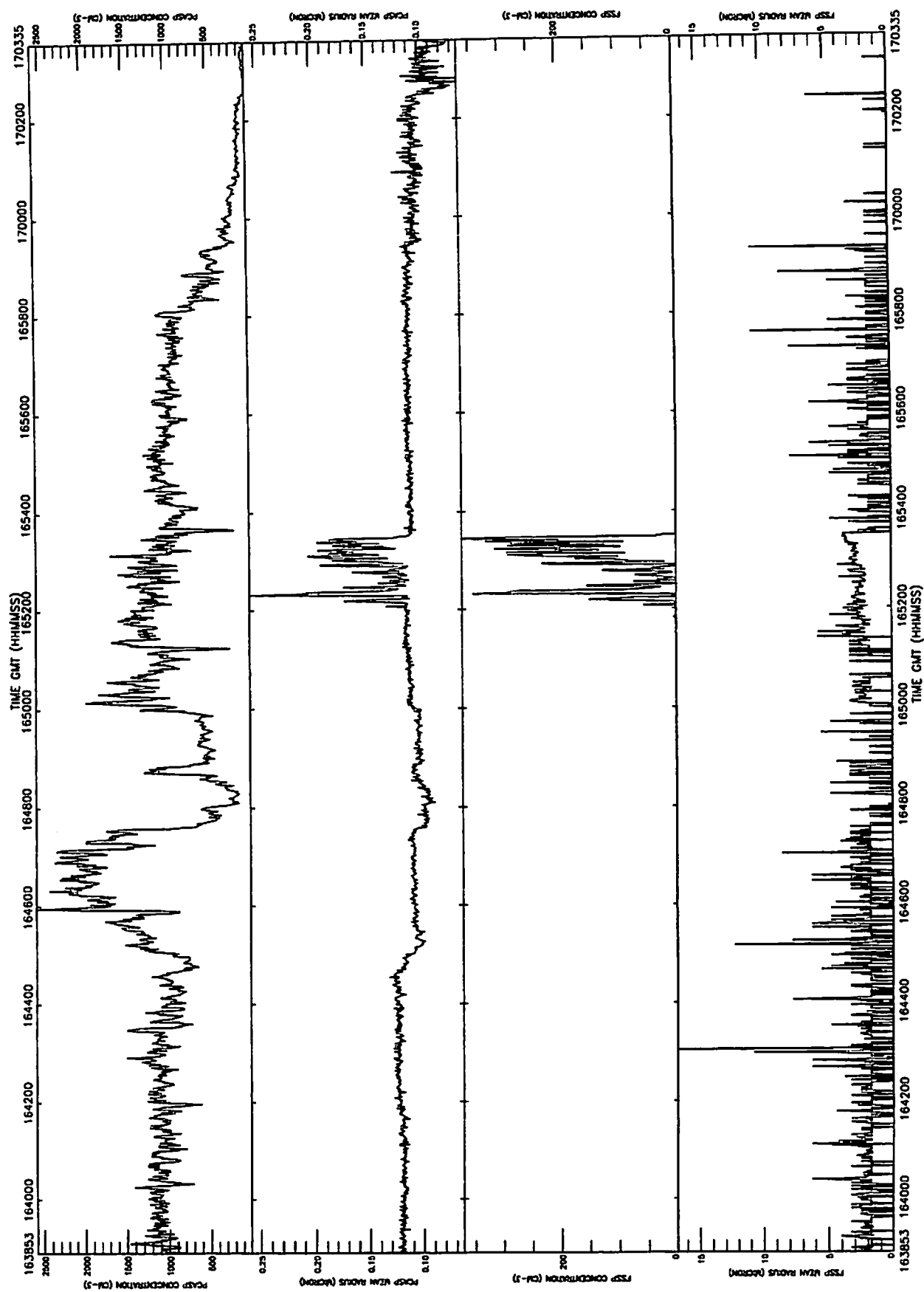




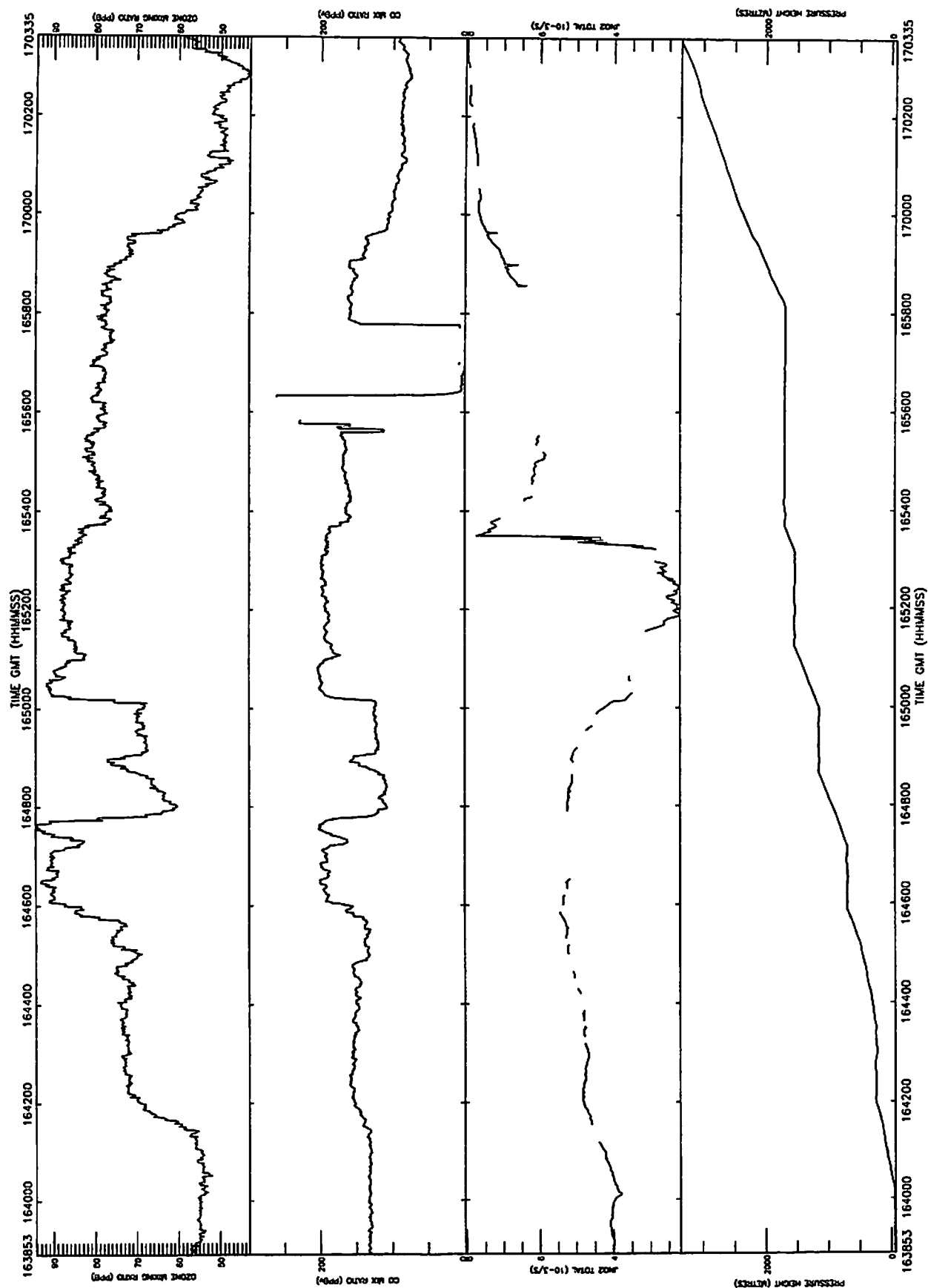
A571 18-AUG-97 P17 50'-FL110 From 163853-170335 Plotted 11-Dec-1997 10:34



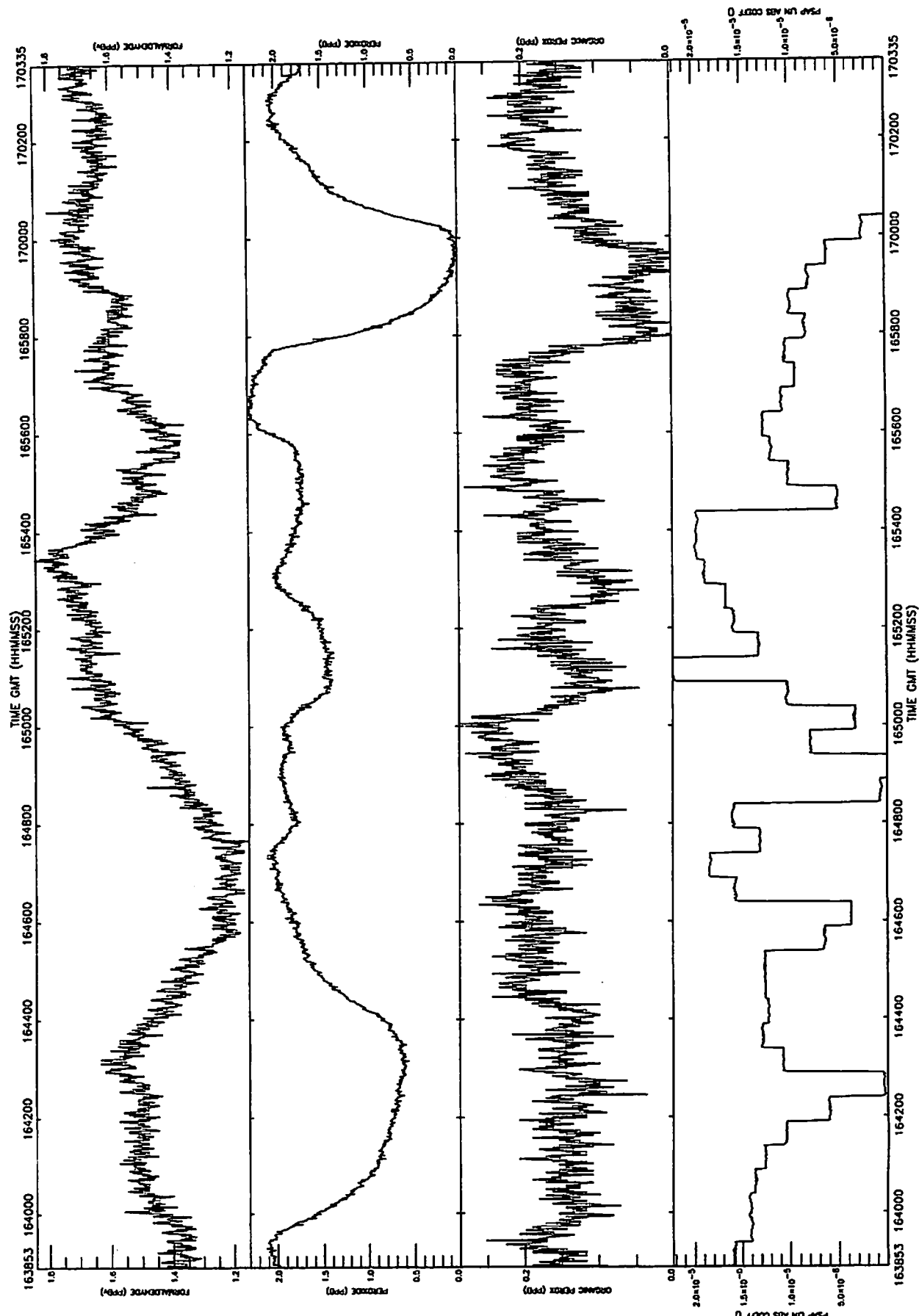
A571 18-AUG-97 P17 50'-FL110 From 163853-170335 Plotted 12-Dec-1997 15:25



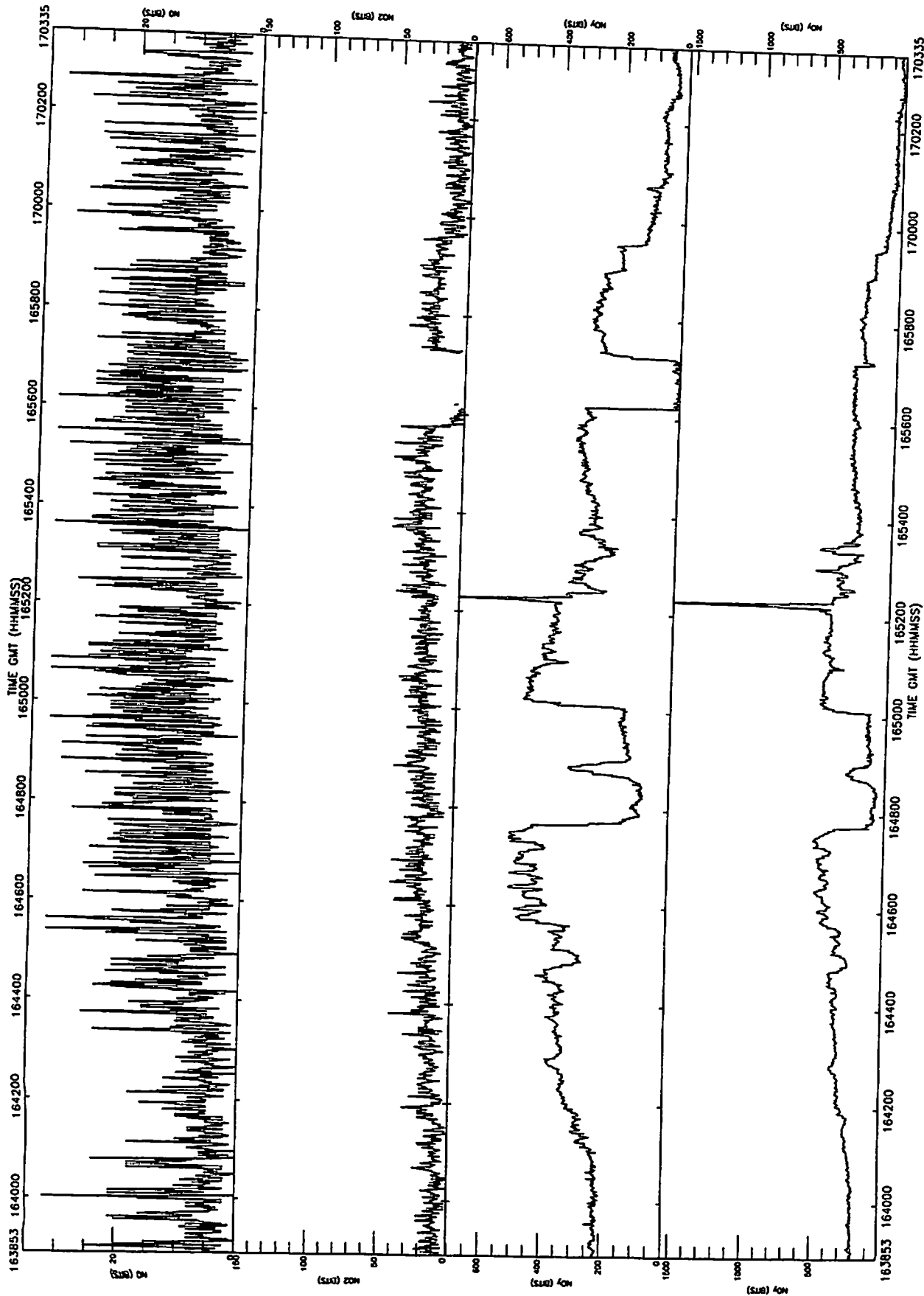
A571 18-AUG-97 P17 50'-FL110 From 163853-170335 Plotted 11-Dec-1997 10:34



A571 18-AUG-97 P17 50'-FL110 From 163853-170335 Plotted 11-Dec-1997 10:34



A571 18-AUG-97 P17 50'-FL110 From 163853-170335 Plotted 11-Dec-1997 15:40



## STATIC PRESSURE (MB)

No of obs 1483  
 Mean 870.891  
 Standard dev 95.2057  
 Max value 1021.54  
 Min value 670.485

## DEICED TRUE TEMP (DEG K)

No of obs 1483  
 Mean 285.595  
 Standard dev 5.57674  
 Max value 293.812  
 Min value 272.857

## DEW POINT (DEG K)

No of obs 1483  
 Mean 282.077  
 Standard dev 5.69450  
 Max value 291.442  
 Min value 259.745

## OZONE MIXING RATIO (PPB)

No of obs 1483  
 Mean 71.3348  
 Standard dev 12.9575  
 Max value 94.1206  
 Min value 43.1556

## PCASP CONCENTRATION (CM-3)

No of obs 1483  
 Mean 897.298  
 Standard dev 495.387  
 Max value 2586.77  
 Min value 10.4206

## FSSP CONCENTRATION (CM-3)

No of obs 1483  
 Mean 6.81120  
 Standard dev 37.6765  
 Max value 370.332  
 Min value 0.000000

## PRESSURE HEIGHT (METRES)

No of obs 1483  
 Mean 1299.19  
 Standard dev 908.150  
 Max value 3349.41  
 Min value -68.7401

## CORRECTED LATITUDE (DEGREES)

No of obs 1483  
 Mean 55.4339  
 Standard dev 0.205991  
 Max value 55.8062  
 Min value 55.0539

## CORRECTED LONGITUDE (DEGREES)

No of obs 1483  
 Mean 1.86851  
 Standard dev 0.559535  
 Max value 2.81046  
 Min value 0.922822

## NORTHWARD WIND COMPT (M S-1)

No of obs 1483  
 Mean 1.14575  
 Standard dev 1.04763  
 Max value 3.47430  
 Min value -0.432373

## EASTWARD WIND COMPT (M S-1)

No of obs 1483  
 Mean 0.231839  
 Standard dev 1.88939  
 Max value 4.76508  
 Min value -3.53215

## VERTICAL WIND COMPT (M S-1)

No of obs 1483  
 Mean -0.301717  
 Standard dev 0.466250  
 Max value 0.791191  
 Min value -1.83356

## WIND SPEED (MS-1)

No of obs 1483  
 Mean 2.17939  
 Standard dev 1.13216  
 Max value 4.81985  
 Min value 0.141478

## WIND DIRECTION (DEG)

Mean 191.439

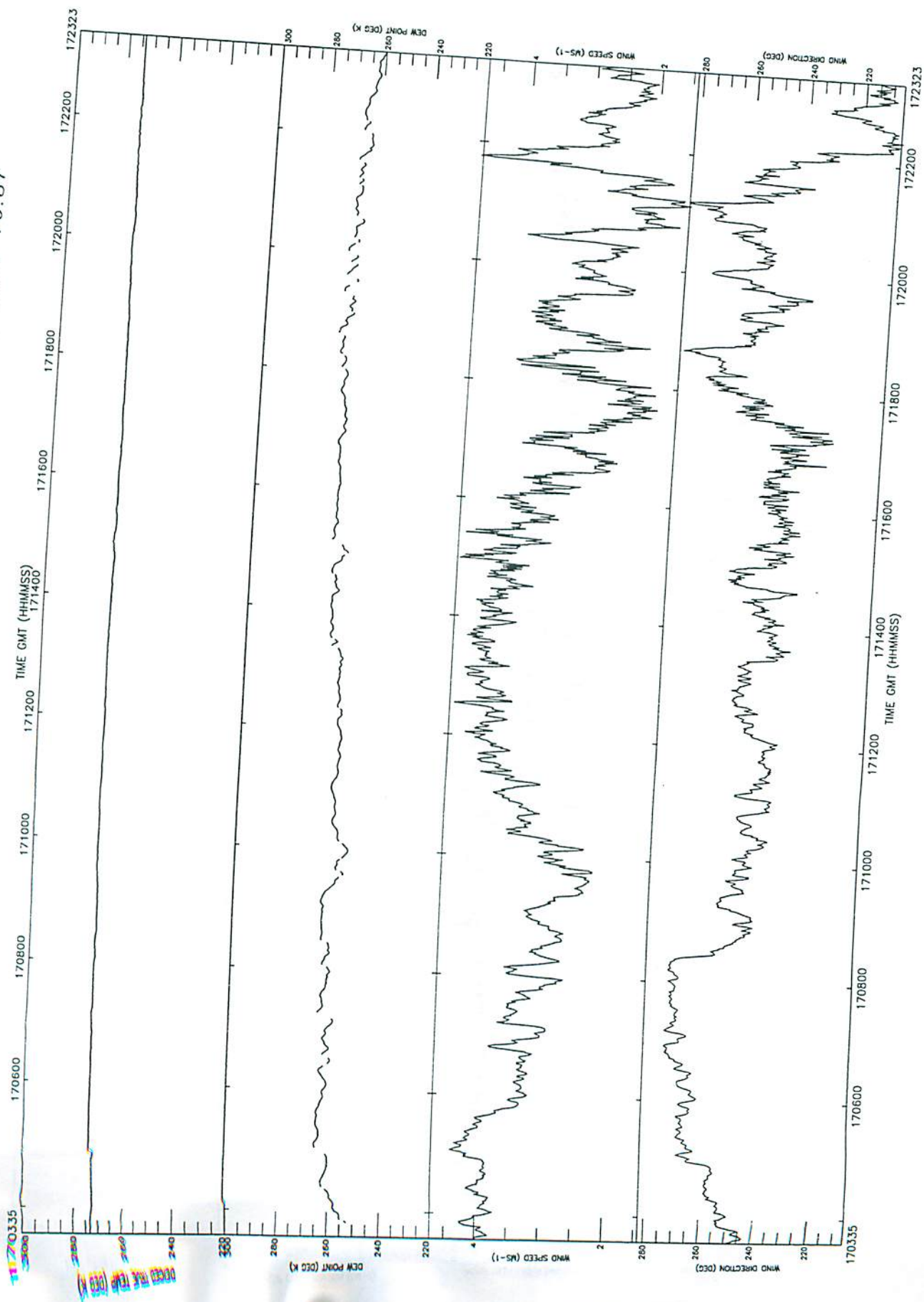
## TRUE AIR SPEED (M S-1)

No of obs 1483  
 Mean 100.459  
 Standard dev 4.92874  
 Max value 110.574  
 Min value 89.5598

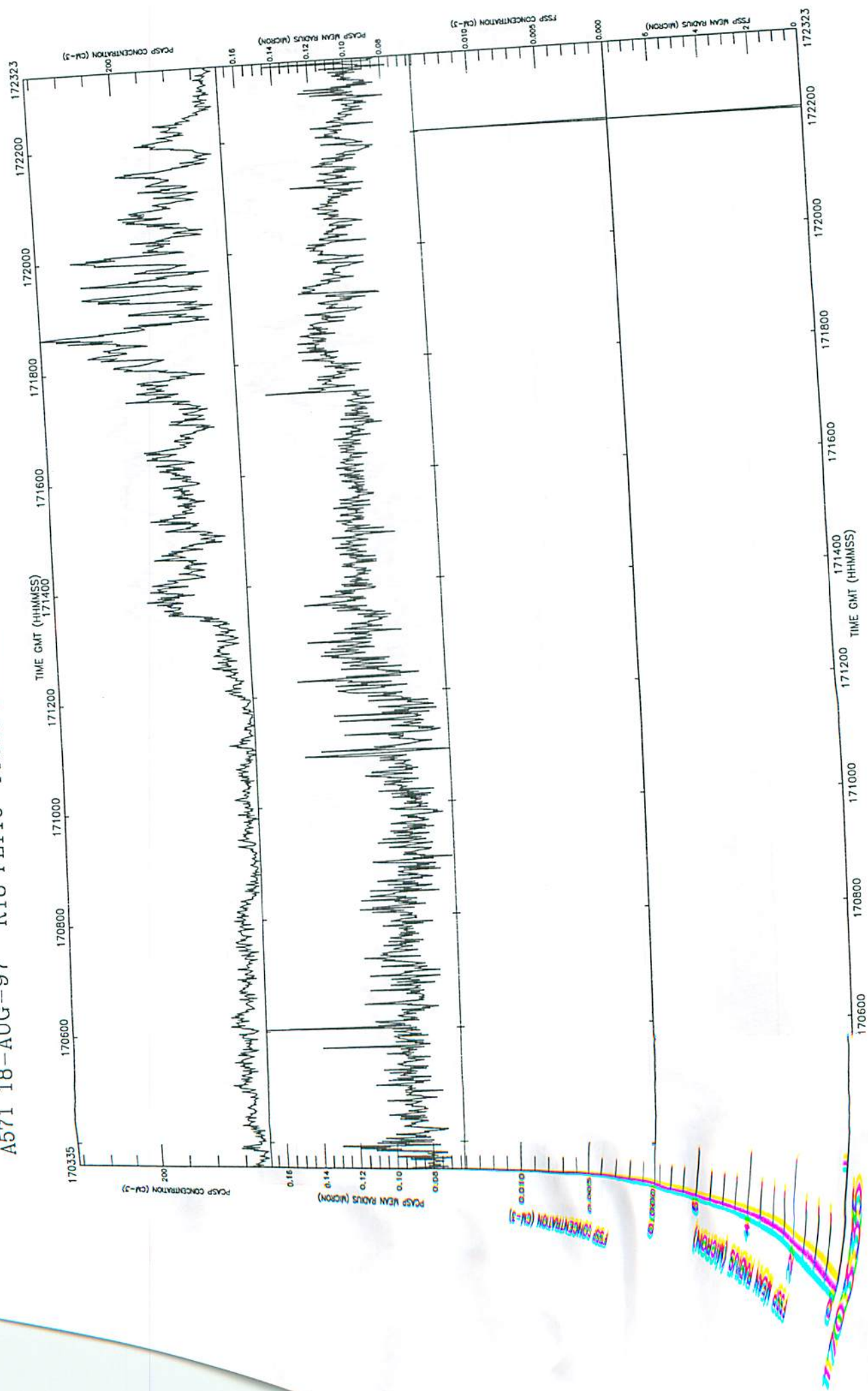
## HEADING (DEG)

Mean 234.948

A571 18-AUG-97 R18 FL110 From 170335-172323 Plotted 11-Dec-1997 10:37

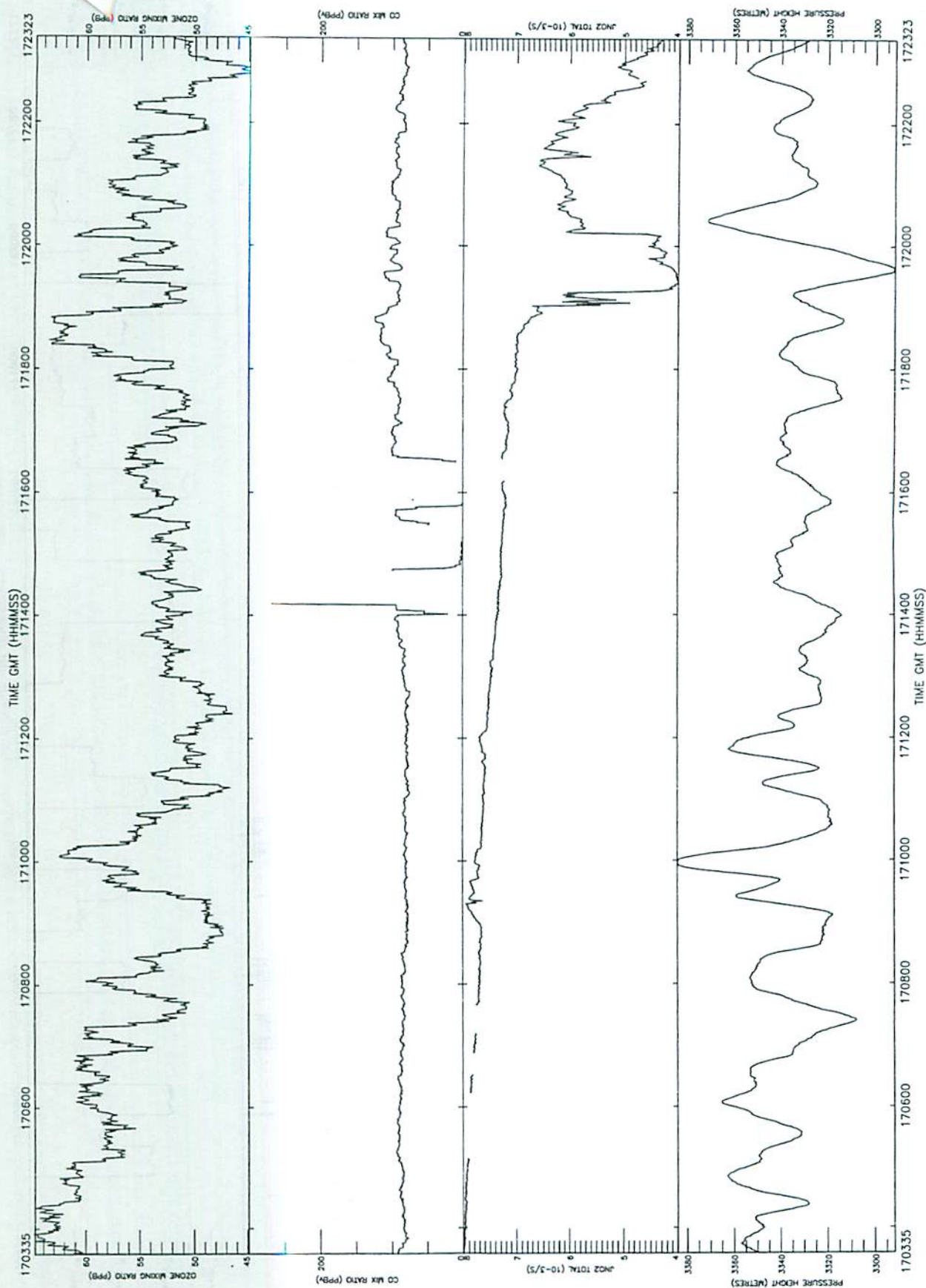


A571 18-AUG-97 R18 FL110 From 170335-172323 Plotted 12-Dec-1997 15:28

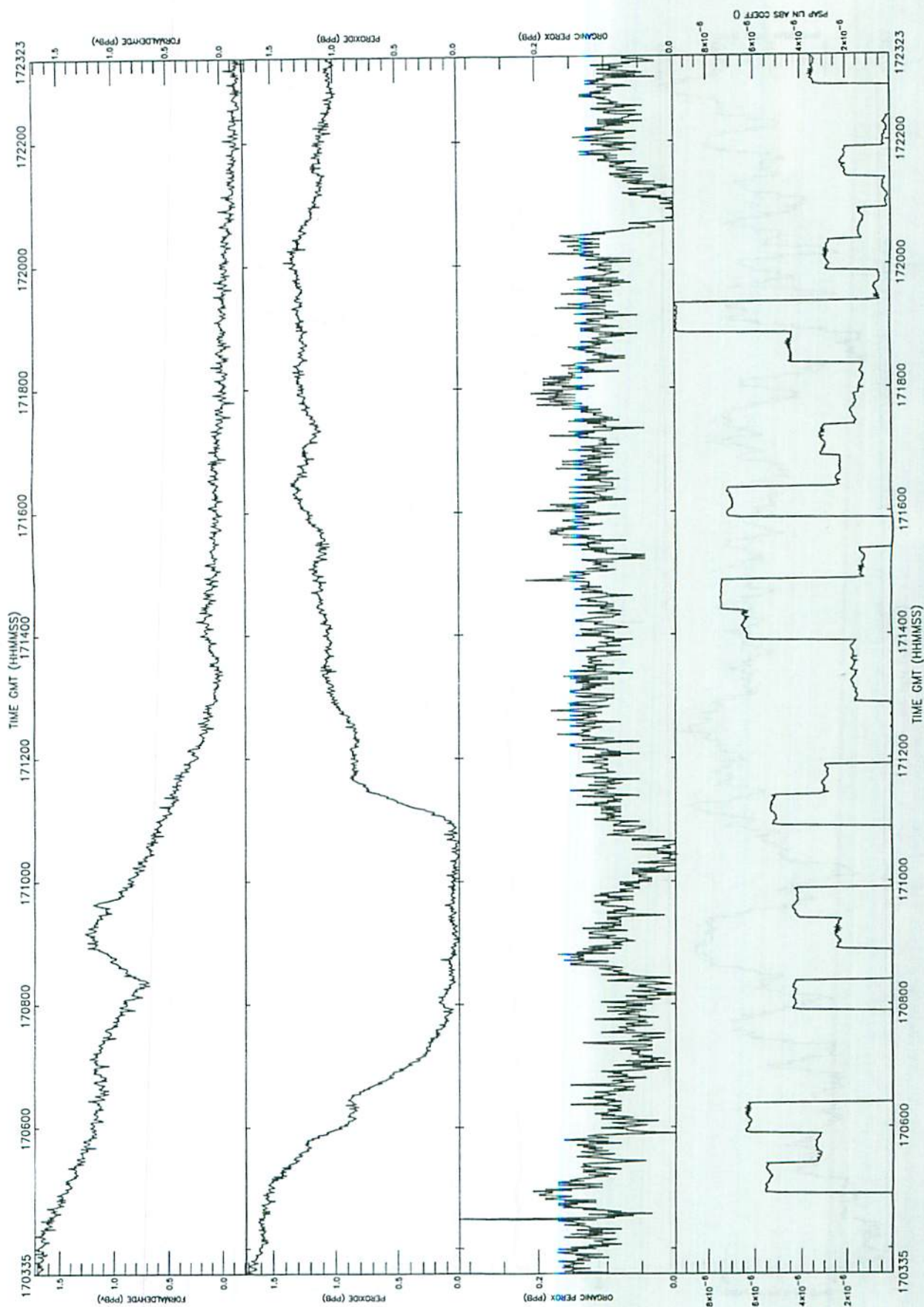




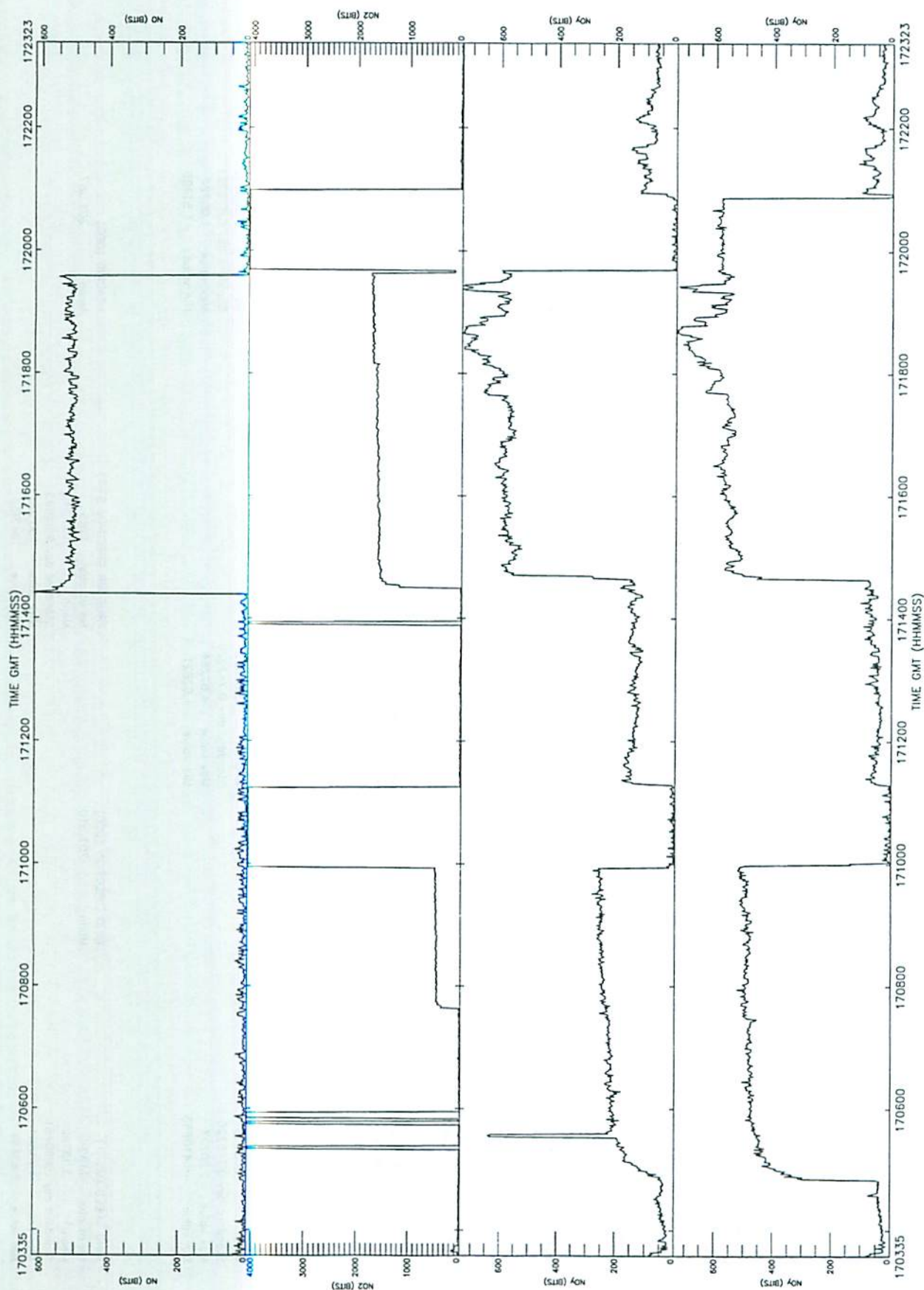
A571 18-AUG-97 R18 FL110 From 170335-172323 Plotted 11-Dec-1997 10:37



A571 18-AUG-97 R18 FL110 From 170335-172323 Plotted 11-Dec-1997 10:37



A571 18-AUG-97 R18 FL110 From 170335-172323 Plotted 11-Dec-1997 10:37





A571 18-AUG-97 R18 FL110 From 170335-172323 *Plotted 12-Dec-1997 15:28*

STATIC PRESSURE (MB)

No of obs 1189  
Mean 671.637  
Standard dev 1.27343  
Max value 675.467  
Min value 667.518

DEICED TRUE TEMP (DEG K)

No of obs 1189  
Mean 273.247  
Standard dev 0.317931  
Max value 273.880  
Min value 272.676

DEW POINT (DEG K)

No of obs 1189  
Mean 264.292  
Standard dev 3.15402  
Max value 271.013  
Min value 252.464

OZONE MIXING RATIO (PPB)

No of obs 1189  
Mean 54.3713  
Standard dev 4.24780  
Max value 64.7806  
Min value 44.8754

PCASP CONCENTRATION (CM-3)

No of obs 1189  
Mean 73.8935  
Standard dev 60.4059  
Max value 358.096  
Min value 3.00000

FSSP CONCENTRATION (CM-3)

No of obs 1189  
Mean 1.186519e-05  
Standard dev 4.091342e-04  
Max value 1.410772e-02  
Min value 0.000000

PRESSURE HEIGHT (METRES)

No of obs 1189  
Mean 3336.02  
Standard dev 14.7909  
Max value 3383.97  
Min value 3291.65

CORRECTED LATITUDE (DEGREES)

No of obs 1189  
Mean 54.3513  
Standard dev 0.443066  
Max value 55.0539  
Min value 53.5663

CORRECTED LONGITUDE (DEGREES)

No of obs 1189  
Mean 0.343260  
Standard dev 0.272997  
Max value 0.922822  
Min value -6.311616e-02

NORTHWARD WIND COMPT (M S-1)

No of obs 1189  
Mean 1.03998  
Standard dev 0.715220  
Max value 2.80797  
Min value -0.410583

EASTWARD WIND COMPT (M S-1)

No of obs 1189  
Mean 3.07422  
Standard dev 0.747920  
Max value 4.57264  
Min value 1.02821

VERTICAL WIND COMPT (M S-1)

No of obs 1189  
Mean 0.308612  
Standard dev 0.376721  
Max value 1.05222  
Min value -1.51495

WIND SPEED (MS-1)

No of obs 1189  
Mean 3.33762  
Standard dev 0.680481  
Max value 4.73063  
Min value 1.43431

WIND DIRECTION (DEG)

Mean 251.310

TRUE AIR SPEED (M S-1)

No of obs 1189  
Mean 153.945  
Standard dev 9.01693  
Max value 160.202  
Min value 104.932

HEADING (DEG)

Mean 201.087

# Glossary

## Aircraft Position, Speed and Attitude

- **Navigation:** The aircraft carries GPS, OMEGA, and inertial navigation systems.
- **Pressure height:** is based on the standard atmosphere as specified by the International Civil Aviation Organisation (sea level pressure of 1013.25 hPa). Pressure height is quoted in terms of Flight Levels (height in hundreds of feet *e.g.* FL100 = 10000 feet).
- **Radar height:** altitude of the aircraft above surface, measured by radar.
- **Time:** All times are UTC.

## General meteorology

- **Tephigrams:** are given for every major profile of each flight. A tephigram is a thermodynamic diagram (temperature (T) - entropy ( $\phi$ ) diagram) used to assess the static stability of a given atmospheric profile. Other meteorological organisations use similar diagrams such as the Emagram or the Skew T log p diagram.
- **Deiced true temperature:** air temperature with corrections for aircraft speed and altitude.
- **Potential temperature:** the temperature that a parcel of air would have if it follows a dry adiabatic lapse rate to the 1000 hPa level.
- **Dew point:** dew point (the temperature at which a sample of air would just become saturated with respect to a plane surface of water if cooled at a constant pressure) calculated from the chilled mirror General Eastern hygrometer.

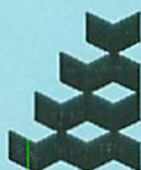
## Cloud Physics

- **PCASP:** The Passive Cavity Aerosol Sampling Probe counts number concentrations (number per  $\text{cm}^3$ ) of particles in 15 channels spaced pseudo-logarithmically over the diameter range 0.10  $\mu\text{m}$  to 3.00  $\mu\text{m}$ , to provide a particle size distribution over this range.
- **FSSP:** The Forward Scattering Spectrometer Probe is used to measure water droplets in the size range 0.5 to 47.0  $\mu\text{m}$  diameter (cloud droplets). It has four range settings, each of which is divided into 15 size channels.

## Chemistry Parameters

- **Ozone:** Calibrated readings from the TECO 49 ozone analyser in ppb. Instrument scientist: Joss Kent and Ken Dewey (UK Met. Office).
- **JNO<sub>2</sub>:** The sum of upward and downward facing radiometers (raw data). Instrument scientists: Christoph Gerbig and Sandra Schmitgen (FZ Jülich).
- **Hydrogen peroxide:** Raw data recorded in ppb (approx.). Instrument scientist: Brian Bandy (UEA Norwich).
- **Organic peroxide:** Raw data recorded in ppb (approx.). Instrument scientist: Brian Bandy (UEA Norwich).
- **Formaldehyde:** Raw data (approx) converted to ppb using actual scale factor and offset. Instrument scientist: Graham Mills (UEA, Norwich).
- **NO<sub>x</sub>:** Parameters (NO, NO<sub>2</sub>, NO<sub>y1</sub>, NO<sub>y2</sub>) were recorded on MRF's data recording system and are plotted in bits. Instrument scientist: Stephane Bauguitte (UEA, Norwich).
- **Bottles:** Please refer to the bottle flight logs (within the flight folder section) to see when these were filled. Analysis carried out at NILU.
- **CO:** Approximate data in ppb from the DRS. Instrument scientist: Sandra Schmitgen (fz-Jülich).





Natural  
Environment  
Research  
Council

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